E. u. P. Würtz GmbH & Co. KG

according to 1907/2006 EU and 1272/2008 EU

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Date of Print / Revision: 25-Jul-2018
Product: PAT®-527/2

1.0 PRODUCT NAME AND SUPPLIER:

Trade Name: PAT®-527/2

Use Conditions: Lubricant- and Release Agent-Preparation for industrial applications for the processing of

plastics, in general manufacturing (e.g. machinery, vehicles / car manufacture, transport

equipment / aerospace etc.) and in construction by trained staff

Application Domains: When revising this safety data sheet no indication existed referring to restrictions of the

ingredients with respect to certain applications. Identified sectors of end-use: e.g. SU3 (industrial uses), SU21 (consumer uses); identified product categories: e.g. PC24 (release products); identified process categories: e.g. PROC1 (closed processes), PROC7 (industrial spraying), PROC8a/8b/9 (transfer into small containers), PROC10 (application by roller or brushing), PROC11 (non-industrial spraying), PROC13 (dipping and pouring); identified environmental release categories: e.g. ERC1, ERC2, ERC4, ERC5. ERC6a, ERC8a, ERC8d.

Supplier: E. und P. Würtz GmbH &Co. KG

In der Weide 13 und 18 D-55411 Bingen/Rhein

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2.0 HAZARDS IDENTIFICATION:

Labeling and Classification according to Directive EU No. 1272 / 2008 (CLP)









GHS-Labels: (GHS02) (GHS07) (GHS08) (GHS09)

Code: DANGER

Hazard Indications: H 225 Highly flammable liquid and vapour

H 304 May be fatal if swallowed and enters airways H 336 May cause drowsiness or dizziness

H 411 H 336 May cause drowsiness or dizziness
Toxic to aquatic life with long lasting effects

Safety Statements (prevention): P 210 Keep away from heat/sparks/open flames/hot surfaces. No smoking

P 233 Keep container tightly closed.

P 240 Ground/bond container and receiving equipment.

P 241 Use explosion-proof electrical/ventilating/lighting equipment.

P 242 Use only non-sparking tools.

P 243 Take precautionary measures against static discharge P 261 Avoid breathing dust/fume/gas/mist/vapours/spray. P 262 Do not get in eyes, on skin, or on clothing.

DO HOU get in eyes, on skin, or on clothing.

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P 264 Wash thoroughly with plenty of water and soap after handling.

P 270 Do not eat, drink or smoke when using this product. P 273 Avoid release to the environment.

P 280 Wear protective gloves/protective clothing/eye protection/face protection

P 281 Use personal protective equipment as required.

Safety Statements (response): P 301+P 330+P 331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P 310 Immediately call a POISON CENTER or doctor / physician.

P 303+P 361+P 353 IF ON SKIN (or hair): Remove / take off immediately all contaminated

clothing. Rinse skin with water / shower.

P 370+P 378 In case of fire: Use CO₂ or foam for extinction. Safety Statements (storage): P 403+P 235 Store in a well ventilated place. Keep cool.

P 405 Store locked up.

Safety Statements (disposal): P 501 Dispose of contents/container to a waste treatment plant

Hazard determining Component(s): Hydrocarbons

Classification: Flammable Liquids Category 2 H 225

Aspiration Category 1 H 304
Spec. Target-Organ-Tox. for unique exposition Category 3 H 336
Aquatic Toxicity Category 2 H 411

Other Hazards: None known.

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Labeling and Classification according to HMIS

Health 1 (slight)
Flammability 2 (moderate)
Reactivity 0 (minimal)
Chronic 0 (minimal

3.0 COMPOSITION / CHEMICAL DESCRIPTION:

Chemical Description: Dispersion of lubricants and release agents in solvents

Hazardous Ingredients: Description: Hydrocarbons

CAS-No.: 64742-49-0

REACH-No.: 01-2119473851-33-XXXX

Concentration: > 25 %

Labeling: H225 (category 2), H304 (category 1), H411 (category 2), H336 (category 3)

4.0 FIRST AID MEASURES:

General Recommendations: In case of contamination move away from product and take off immediately all

contaminated clothing.

In case of irritation, move to fresh air. If irritation persists, get medical attention.

Skin contact:

Wash off properly with water and soap. If skin irritation persists, get medical attention.

Eye contact:

Flush with large amounts of water for at least 15 minutes, keeping eyelids open. Get

medical attention.

Ingestion: Immediately clean mouth thoroughly with water. Do NOT induce vomiting. Consult

medical doctor.

Specific Hazards / Effects: Already small amounts of this product - having entered the lungs after ingestion

and/or vomiting - may cause lung cancer or an inflammation of the lungs. Breathing of

product vapors may cause drowsiness and dizziness.

Further information: Treatment of symptoms and supportive therapy as indicated (decontamination, vital

functions). Specific antidote: unknown.

5.0 FIRE FIGHTING MEASURES:

Extinguishing Media: CO₂, dry chemical, foam

Unsuitable Extinguishing Media: water
Specific Hazards: none known

Hazardous Combustion Products: The typical combustion products like carbon-monoxide (CO) and carbon-dioxide (CO₂)

may occur. In contact with air, vapors may form explosive mixtures.

Special Equipment: Wear suitable respiratory equipment and fire-proof clothing.

Further Information: Cool down containers close to fire by spraying water to the hull. Collect used

extinguishing media and dispose of according to section 13.0.

6.0 ACCIDENTAL RELEASE MEASURES:

Personal Procedures: Safeguard scene of accident / leakage / spill. Wear personal protective equipment.

Avoid contact with skin and eyes, do not breathe vapors / fumes. See to an adequate

ventilation.

Environmental Procedures: Do not dispose of to drains, sewers or public waterways. Notify authorities in case of

soil contamination.

Spill and Leak Procedures: See to an adequate ventilation. Spills should be taken up mechanically with suitable

absorbent and placed in suitable containers.

Further Information: Dispose of contaminated product according to section 13.0.

7.0 HANDLING AND STORAGE:

General Recommendations: The hygiene and safety procedures typical of working with chemicals should be

followed. Avoid contact with skin and eyes. Safeguard scene of accident / leakage /

spill. Do not smoke.

Hygiene Procedures: Keep away from food stuffs, drinks and feed stuffs. Prior to pauses and after work

thoroughly wash your hands. Do not smoke.

Protection against Explosion: Storage class: 3 (flammable liquids). Follow directives for the storage of combustible

products. Take precautionary measures against static discharges. Keep away from sources of ignition and static electrical charges. Avoid the formation of an explosive atmosphere. Protect against excessive heat. Employ explosion-proof equipment /

machinery, only. Do not smoke.

Co-storage Information: Do not store together with explosive or auto-igniting materials, nor with peroxides or

strong oxidizers.

Further Information on storage conditions: Store in a well ventilated, dry and cool place. Follow directives for the storage of

combustible and water endangering products. Keep away from excessive heat.

Further Information: Keep container well sealed. Employ product only in well ventilated places.

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8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION:

Information on equipment: see section 7.

Maximum Exposure Limits: MEL (hydrocarbons): 1000 mg/m³ or 200 ml/m³ (TRGS 901)

DNEL (workers, dermal contact, chronic effects): 773 mg/kg DNEL (workers, breathing, chronic effects): 2035 mg/m³

PNEC: not applicable

General Hygiene and Protection Measures: Do not eat, drink or smoke during work. Keep away from food stuffs, drinks and feed

stuffs. Take off immediately all contaminated clothing. Avoid contact with skin and

eyes. Wash hands thoroughly before pauses and after work.

Respiratory Equipment: Wear mask with filter type A-P2 according to EN 14387; during intensive prolonged

exposition, wear suitable respiratory equipment.

Skin Protection: Wear suitable dissipative and chemically resistant gloves according to EN 388, EN 1149-1 and EN 1149-2

in conjunction with EN 374.

Eye Protection: Wear safety glasses with side shields (f.i. according to. EN 166)

Body Protection: Wear antistatic shoes according to EN 20345, apron, suitable protective clothing
Further Information: It is recommended to install an automatic eye-flush-system close to the working place.
The personal protection equipment should match the actual working conditions in terms of its design and features. Due to the abundance of protective equipment / materials details on behalf of the personal protection equipment should be discussed with the

suppliers of this equipment.

9.0 PHYSICAL AND CHEMICAL PROPERTIES:

Appearance / Color / Odor: Liquid / colorless / mild Boiling Point: app. 100 °C

Flashpoint: < 12 °C (DIN 51755)

Auto-Ignition: ca. 250 °C

Explosion Limits: lower: 0,7 Vol% upper: 8 Vol% Vapor Pressure: app. 10 hPa at 20 °C Ca. 0,7 kg/L

Solubility in water: insoluble

10.0 STABILITY AND REACTIVITY:

Stable in normal use. Keep away from direct heat.

Incompatibilities: Sparks, flames, heat. Strong oxidizers

Hazardous Reactions: In contact with air, vapors may form explosive mixtures.

Hazardous Decomposition Products: None known in normal industrial use. In case of combustion carbon-monoxide (CO)

and carbon-dioxide (CO₂) may be generated.

11.0 TOXICOLOGICAL INFORMATION:

All data have been derived of the ingredients' or similar products' data.

Toxicity (oral) LD_{50} > 2.000mg/kg (rat, male)

Irritation: Eyes: not irritant
Skin: not irritant
Inhalation: not irritant

Sensitization: Not sensitizing.

Further Information: Already small amounts of this product – having entered the lungs after ingestion

and/or vomiting – may cause lung cancer or an inflammation of the lungs. Breathing of product vapors may cause drowsiness and dizziness. Further hazardous properties

may exist.

12. ECOLOGICAL INFORMATION:

All data stem from results obtained for the ingredients or comparable products.

Biologic Degradation:

All ingredients are biodegraded.

Bioaccumulation:

Not to be expected (evaporation).

Fish-Toxicity: $LC_{50} > 10 \text{ mg/l}$ Algae-Toxicity: $EC_{50} > 10 \text{ mg/l}$ Daphnia-Toxicity: $10 \text{ mg/l} > EC_{50} > 0.1 \text{ mg/l}$

13. DISPOSAL CONSIDERATIONS:

Product: Waste disposal should be in accordance with existing Community, National and local

regulations.

Recommended: Incineration. Do not release to (public) waterways / drains. Do not

release together with regular waste.

EAK-Number: The classification has to be made according to the EAK-directive with respect to the

area and process of application.

Empty container: Recycling should be preferred over disposal. The disposal of empty containers must

be in accordance with the requirements for the disposal of the product.

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14. TRANSPORT INFORMATION:

ADR / RID: UN 1866 RESIN SOLUTION, 3, PG II, (D/E)
EMS-Number: F-E, S-E Marine-Pollutant: No
Label(s): Label No. 3 Dangerous to the environment





(Ground Transportation)

15. REGULATORY INFORMATION:

Labeling: This product requires labelling according to EU-directives.

National Laws (Germany): Limitations of Employment:

Follow JarbSchG and Mutterschutzrichtlinienverordnung (youth employment and pregnancy

restrictions)

Water-contaminating class (D, A, CH): WGK 1 slightly hazardous to water (VwVWS 17.05.1999)

16. OTHER INFORMATION:

All ingredients are TSCA- and EINECS-listed or exempted. We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, expressed or implied, and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of their use. Such data is furnished solely for your consideration, investigation and verification. It is the obligation of the user to ensure that all legal requirements are fulfilled when this product is used.

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No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environme ntal Release Category (ERC)	Article Category (AC)	Specified
1	Manufacture of substance	3	8, 9	NA	1, 2, 3, 4, 8a, 8b, 15	1, 4	NA	ES5247
2	Distribution of substance	3	8, 9	NA	1, 2, 3, 4, 8a, 8b, 9, 15	1, 2, 3, 4, 5, 6a, 6b, 6c, 6d, 7	NA	ES5250
3	Formulation & (re)packing of substances and mixtures	3	10	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15	2	NA	ES5252
4	Use as lubricants	3	NA	NA	1, 2, 3, 4, 7, 8a, 8b, 9, 10, 13, 17, 18	4, 7	NA	ES5258
5	Use as lubricants	21	NA	1, 24, 31	NA	8a, 8d, 9a, 9b	NA	ES5520
6	Use as lubricants	22	NA	NA	1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 20	8a, 8d, 9a, 9b	NA	ES5279
7	Use as Functional Fluids	3	NA	NA	1, 2, 3, 4, 8a, 8b, 9	7	NA	ES5266
8	Use as Functional Fluids	21	NA	16,17	NA	9a, 9b	NA	ES5533
9	Use as Functional Fluids	22	NA	NA	1, 2, 3, 8a, 9, 20	9a, 9b	NA	ES5288
10	Use in laboratories	3	NA	NA	10, 15	2, 4	NA	ES5268
11	Use in laboratories	22	NA	NA	10, 15	8a	NA	ES5292
12	Use in metal working fluids / rolling oils	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 17	4	NA	ES5260
13	Use in metal working fluids / rolling oils	22	NA	NA	1, 2, 3, 8a, 8b, 9, 10, 11, 13, 17	8a, 8d	NA	ES5282
14	Uses in coatings	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 14, 15	4	NA	ES5254
15	Uses in coatings	21	NA	1, 8, 9a, 9b, 18, 23, 24, 31, 34	NA	8a, 8d	NA	ES5295
16	Uses in coatings	22	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 10, 11, 13, 15, 19	8a, 8d	NA	ES5275
17	Use as binders and release agents	3	NA	NA	1, 2, 3, 4, 6, 7, 8b, 10, 13, 14	4	NA	ES5262
18	Use as binders and release agents	22	NA	NA	1, 2, 3, 4, 6, 8a, 8b, 10, 11, 14	8a, 8d	NA	ES5284
19	Rubber production and processing	3	10, 11	NA	1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 13, 14, 15, 21	1, 4, 6d	NA	ES5270

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measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Mater Water How wastewater treatment required. Water If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Prevent discharge of undissolved substance to orecover from onsite wastewater. Sediment Risk from environmental exposure is driven by			Product: PAT®-527/2			
Sectors of end-use SUB: Manufacture of bulk, large scale chemicals (including petroleum product SUB: Manufacture of fine chemicals) PROC1: Use in closed, continuous process with occasional controlled exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis or formulation) PROC4: Use in batch and other process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC15: Use as islaboratory reagent Environmental Release Environmental Release Environmental Release Environmental Release Environmental Release Categories Activity Manufacture of the substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC15: Use as islaboratory reagent Environmental Release Environmental Release Environmental Release Categories Activity Manufacture of the substance or use as a process chemical or extraction age within closed or contained systems. Includes incidental exposures during recyrecovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading including marine vessel/barge, roadrali car and but contained. 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (kg/day): Regional use tonnage (kg/day): Fraction of EU tonnage used locally: Annual site tonnage (kg/day): Fraction of regional tonnage used locally: Annual site tonnage (kg/day): Fraction of regional tonnage used locally: Areas) Other given operational Continuous exposure Environmental exposure Environmental exposure Environmental exposure Environmental exposure Environmental exposure Emission or Release Factor: Soll mitial release prior to R						
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vessels/large containers at dedicated facilities PROC15: Use as laboratory reagent Environmental Release Categories Activity Annufacture of the substance or use as a process chemical or extraction ager within closed or contained systems. Includes incidental exposures during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, sampling, associated lacybours during recy recovery, material transfers, storage, ampling, associated lacybours during recy recovery, material transfers, storage, ampling, associated lacybours during recy recovery, material transfers, storage, ampling, associated lacybours during recy recovery, material transfers, storage, ampling, associated lacybours during recy recovery material transfers, storage, ampling, associated lacybours during recy recovery for material exposure for ERC1, ERC4 Maximum dally site transfers, torage, ampling, associated lacybours during recy recovery for material exposure for extraction ager within tenses of processed or portion for extraction ager within tenses of processed or portion for provide and products, not become for extraction and decided and possible recover from order and possible recover from order and possible recover from order and possible recover from possible wastewater treatment required. Water Prevent discharge of undissolved s						
Environmental Release Categories Activity Manufacture of the substance or use as a process chemical or extraction ager within closed or contained systems. Includes incidental exposures during recy recovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading (including marine vessel/barge, road/rail car and but container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (tons/year): Fraction of EU tonnage used in region: Fraction of EU tonnage used locally: Annual site tonnage (tons/year): Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Environment factors not influenced by risk management Environment factors not influenced by risk management Other given operational conditions affecting environmental exposure Emission or Release Factor: Air Emission or Release Factor: Soil Initial release prior to RMM Air Technical conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Ediment Record: Industrial use of processing aids in processes and products, not becore and processing aids in process servers covery ampling, associated laboratory activities maintenance and bucing including fincluding marine vessel/barge, armpling, associated laboratory activities maintenance and bucing including in						
Environmental Release Categories part of articles Activity Manufacture of the substances ERC4: Industrial use of processing aids in processes and products, not become part of articles Manufacture of the substance or use as a process chemical or extraction ager within closed or contained systems. Includes incidental exposures during recyrecovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading (including marine vessel/barge, road/rail car and but container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site donnage (kg/day): Regional use tonnage (kg/day): Regional use tonnage (tons/year): Fraction of EU tonnage used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year) Frequency and duration of use Environment factors not influenced by risk management Environment factors not influenced by risk management Other given operational conditions affecting environmental exposure Environmental exposure Technical conditions and measures to recover limit discharges, air emissions and release Factor: Water Frechalcal conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent lesses from the site ERC1: Manufacture of the substance or use as a process chemical or extraction ager within closed or ontained systems, includes includent approach includes includent approach includes and process (glore) as a process level (source) or glore in the street of the substance of the substance or ontained shorters of a strain and process and products, not because to soil or a factor and bustance or onterior as and process in a process from the site ERC1: Manufacture of the substance or use as a process chemical exposures and products includes and process or and process of the substance or on the substance or on the process of the proces						
ERC4: Industrial use of processing aids in processes and products, not becore categories Activity Manufacture of the substance or use as a process chemical or extraction age within closed or contained systems. Includes incidental exposures during recy recovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading (including marine vessel/barge, road/rail car and bul container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site donage (kg/day): Regional use tonnage (kg/day): Regional use tonnage (kg/day): Regional use tonnage (tons/year): Fraction of regional for ground		1	• •			
Activity Manufacture of the substance or use as a process chemical or extraction ager within closed or contained systems. Includes incidental exposures during recy recovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading (including marine vessel/barge, road/rail car and bul container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (4500 ton(s)/year (tons/year): Fraction of regional						
within closed or contained systems. Includes incidental exposures during recy recovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading (including marine vessel/barge, road/rail car and bul container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (dos/day): Regional use tonnage (tons/year): Fraction of EU tonnage used locally: Annual site tonnage (tons/year): Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Continuous exposure 100 days/year Dilution Factor (River) 10 Dilution Factor (Coastal Areas) 100 Areas) 100 Continuous exposure 5,0.10-2 Emission or Release Factor: Air 5,0.10-5 Emission or Release Factor: Water 5,0.10-4 Emission or Release Factor: Soil 1,0.10-4 Initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and release to soil Organizational measures to prevent/limit release from the site Sediment Risk from environmental exposure is driven by	Categories					
within closed or contained systems. Includes incidental exposures during recy recovery, material transfers, storage, sampling, associated laboratory activities maintenance and loading (including marine vessel/barge, road/rail car and but container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (kg/day): Regional use tonnage (tons/year): Fraction of EU tonnage used in region: Fraction of Fe Understand tonnage used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Annual site tonnage (tons/year): Continuous exposure 100 days/year Dilution Factor (River) 10 Dilution Factor (Coastal Areas) Frequency and duration of use Environment factors not influenced by risk management Frequency and duration of use Environment factors not influenced by risk management Frequency and duration of use Environment factors not influenced by risk management Frequency and duration of use Continuous exposure Dilution Factor (River) Dilution Factor (Coastal Areas) Areas Sound of the provide a typical register of the provide and release factor: Water Sound of the provide and reficiency of (%): (Efficiency: 90 %) Water Water Maximum daily site 45000 kg/day 4500 ton(s)/year 100 days/year 100 days	Activity	Manufacture of the substa	nce or use as a process chemical or extraction agent			
maintenance and loading (including marine vessel/barge, road/rail car and but container) 2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (kg/day): Regional use tonnage (tons/year): Fraction of EU tonnage used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Frequency and duration of use Continuous exposure Environment factors not influenced by risk management Other given operational conditions affecting environmental exposure Other given operational conditions affecting environmental exposure Emission or Release Factor: Water Emission or Rele						
2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): Regional use tonnage (tons/year): Regional use tonnage (tons/year): Fraction of EU tonnage used locally: Annual site tonnage (tons/year): Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Frequency and duration of use Environment factors not influenced by risk management Other given operational conditions affecting environmental exposure Other given operational conditions affecting environmental exposure Emission or Release Factor: Water Emission or Release Factor: Water Emission or Release Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to prevent or release to soil Organizational measures to prevent release from the site Sediment Raminum daily site tonnage (4500 ton(s)/year 10.10 days/year 100 days/yea						
2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4 Maximum daily site tonnage (kg/day): A5000 kg/day A5000 ton(s)/year A5000 ton(s)						
Amount used Maximum daily site tonnage (kg/day): Regional use tonnage (tons/year): 4500 ton(s)/year 4	2.1 Contributing scenario co	ntrolling environmenta	I exposure for: ERC1, ERC4			
Amount used Regional use tonnage (tons/year): Fraction of EU tonnage used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Frequency and duration of use (tons)/year Frequ						
Amount used Fraction of EU tonnage used in region: Fraction of regional tonnage used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year): 4500 ton(s)/year 4500 ton(s)/year 45		tonnage (kg/day):				
Amount used Fraction of EU tonnage used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Frequency and duration of use Environment factors not influenced by risk management Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and releases to soil Organizational measures to prevent release from the site Fraction of EU tonnage used locally: Annual site tonnage (4500 ton(s)/year (100 days/year 100 days/ye			4500 ton(s)/year			
used in region: Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Continuous exposure 100 days/year Environment factors not influenced by risk management Other given operational conditions affecting environmental exposure Emission or Release Factor: Air 5,0.10-2 Emission or Release Factor: Soil 1,0.10-4 initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to reverted. Water Water If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Water Prevent discharge of undissolved substance to or recover from onsite wastewater. Sediment Risk from environmental exposure is driven by		 				
Fraction of regional tonnage used locally: Annual site tonnage (tons/year): Frequency and duration of use Environment factors not influenced by risk management Other given operational conditions affecting environmental exposure Environmental exposure Other given operational conditions affecting environmental exposure Frequency and duration of use Dilution Factor (River) Dilution Factor (Coastal Areas) Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Water Emission or Release Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Frequency and duration of regional tonnage 4500 ton(s)/year 100 days/year 100 100 100 100 100 100 100 1	Amount used		0,1			
tonnage used locally: Annual site tonnage (tons/year): Frequency and duration of use Continuous exposure Environment factors not influenced by risk management Cother given operational conditions affecting environmental exposure Environmental exposure Environmental exposure Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Water Emission or Release Factor: Soil Initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site tonnage used locally: 4500 ton(s)/year 100 100 200 Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Water			1			
(tons/year): (tons/year):		<u> </u>				
Environment factors not influenced by risk management Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Water Emission or Release Factor: Water Emission or Release Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Continuous exposure 100 100 100 100 100 100 100 1		Annual site tonnage	4500 ton(s)/year			
Dilution Factor (River) Dilution Factor (Coastal Areas) Dilution Factor (Coastal Areas) 100						
Environment factors not influenced by risk management Dilution Factor (Coastal Areas) Emission or Release Factor: Air Emission or Release Factor: Water Emission or Release Factor: Water Emission or Release Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Dilution Factor (Coastal Areas) 100 Emission or Release Factor: Water In July 10-4 In Treat air emission to provide a typical results of the site of the sit	Frequency and duration of use	· ·				
Influenced by risk management Areas) Dilution Factor (Coastal Areas) 100	Environment factors not	` '	10			
Other given operational conditions affecting environmental exposure Emission or Release Factor: Water Emission or Release Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Factor: Air 5,0.10-2 Emission or Release 1,0.10-4 initial release 4 Air Treat air emission to provide a typical releficiency of (%): (Efficiency: 90 %) Water No wastewater treatment required. Water If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Water Prevent discharge of undissolved substance to orecover from onsite wastewater. Sediment Risk from environmental exposure is driven by			100			
Other given operational conditions affecting environmental exposure Emission or Release Factor: Water Emission or Release Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Temission or Release 3,0.10-5 In 1,0.10-4 Initial release prior to RMM Treat air emission to provide a typical reficiency of (%): (Efficiency: 90 %) Water No wastewater treatment required. Water If discharging to domestic sewage treatment plan no onsite wastewater treatment required. Water Prevent discharge of undissolved substance to or recover from onsite wastewater. Sediment Risk from environmental exposure is driven by			5.0.10-2			
Factor: Water I,0 .10-4 Initial release prior to RMM Air Freat air emission to provide a typical results of the provide and the provide and the provide and the p			0,0 .10 2			
Factor: Soil initial release prior to RMM Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Factor: Soil initial release prior to RMM Air Treat air emission to provide a typical refficiency of (%): (Efficiency: 90 %) Water No wastewater treatment required. Water If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sediment Risk from environmental exposure is driven by			3,0 .10-5			
Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Air Treat air emission to provide a typical refficiency of (%): (Efficiency: 90 %) Water No wastewater treatment required. Water If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sediment Risk from environmental exposure is driven by	environmental exposure		1,0 .10-4			
measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Gischarges at process level (source) to prevent release Water Water Mo wastewater treatment required. If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Prevent discharge of undissolved substance to o recover from onsite wastewater. Sediment Risk from environmental exposure is driven by		initial release prior to RMM	1			
(source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Water No wastewater treatment required. If discharging to domestic sewage treatment plar no onsite wastewater treatment required. Prevent discharge of undissolved substance to orecover from onsite wastewater. Sediment Risk from environmental exposure is driven by		Air	Treat air emission to provide a typical remova efficiency of (%): (Efficiency: 90 %)			
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Water Water If discharging to domestic sewage treatment plan no onsite wastewater treatment required. Prevent discharge of undissolved substance to orecover from onsite wastewater. Sediment Risk from environmental exposure is driven by		Water				
discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site Mater No onsite wastewater treatment required. Prevent discharge of undissolved substance to orecover from onsite wastewater. Sediment Risk from environmental exposure is driven by			·			
releases to soil Organizational measures to prevent/limit release from the site Water Prevent discharge of undissolved substance to orecover from onsite wastewater. Sediment Risk from environmental exposure is driven by						
Organizational measures to recover from onsite wastewater. Sediment Risk from environmental exposure is driven by	releases to soil	Water	Prevent discharge of undissolved substance to or			
			_			
freshwater sediment.		Sediment	Risk from environmental exposure is driven by freshwater sediment.			
Common practices vary across sites thus conservative process release						
estimates used.						

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			Flouu		PAT -321/2	
	Type of Treatme		Domestic sewage tr	reatment plant		
		e of sewage nt plant effluent	10.000 m3/d			
Conditions and measures related	Degrada	ation efficiency	96,2 %			
to sewage treatment plant	Percentage removed from waste water		96,2 %			
		Treatment	Do not apply indust should be incinerate			
Conditions and measures related to external treatment of waste for disposal		eatment	During manufacturir generated.	ng no waste of the	e substance is	
Conditions and measures related to external recovery of waste	Recover	y Methods	During manufacturing no waste of the substangenerated.		substance is	
2.2 Contributing scenario con PROC8a, PROC8b, PROC15	trolling	y worker exposure	e for: PROC1, PR	OC2, PROC3, I	PROC4,	
	Concentration of the Substance in Mixture/Article		Covers percentage substance in the product up to 100 % (unless stated differently).			
Product characteristics	Physical Form (at time of use)		liquid			
	Vapour pressure		0,5 - 10 kPa			
Frequency and duration of use	Frequency of use		8 hours/day			
Other operational conditions affecting workers exposure	Assumes uses at not more than 20 $^{\circ}$ C above ambient te mperature, unless stated differently.					
	General systems	exposures (closed)	Handle substance within a closed system.(PROC1)			
Technical conditions and measures to control dispersion from source towards the worker	General exposures (closed systems) Use in contained batch processes		Handle substance within a closed system.(PROC2)			
			Store substance within a closed system.(PROC1, PROC2)			
3. Exposure estimation and Environment	referen	ce to its source				
Contributing Specific conditi	ons	Compartment	Value	Level of	RCR	

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	4300000 kg/day	

ESVOC spERC 1.1v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

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		Product:	PAT®-527/2		
1. Short title of Exposure So	enario 2: Distribution of s	substance			
Main User Groups		of substances as such or in pre	eparations at industrial		
Sectors of end-use	sites SU8: Manufacture of bulk, large scale chemicals (including petroleum products)				
	SU9: Manufacture of fine ch	emicals			
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)				
Environmental Release	PROC15: Use as laboratory				
Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC3: Formulation in materials ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b: Industrial use of reactive processing aids ERC6c: Industrial use of monomers for manufacture of thermoplastics ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7: Industrial use of substances in closed systems				
2.1 Contributing scenario co ERC5, ERC6a, ERC6b, ERC6		exposure for: ERC1, ERC2	, ERC3, ERC4,		
	Maximum daily site tonnage (kg/day):	42 kg/day			
	Regional use tonnage (tons/year):	422 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	0,002			
	Annual site tonnage (tons/year):	0,84 ton(s)/year			
Frequency and duration of use	Continuous exposure	20 days/year			
Environment featers act	Dilution Factor (River)	10			
Environment factors not influenced by risk management	Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	1,0 .10-3			
Other given operational conditions affecting	Emission or Release Factor: Water	1,0 .10-6			
environmental exposure	Emission or Release Factor: Soil	1,0 .10-5			
	initial release prior to RMM				

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		١		Produ		PA1°-527/2
Technical condition measures at proce		Air		Treat air emission t efficiency of (%): (E		l removal
(source) to preven		Water		No wastewater trea		
Technical onsite on measures to reduce		Water		If discharging to do	mestic sewage tre	atment plant,
discharges, air emissions and				no onsite wastewater treatment required.		
releases to soil		Water		Prevent discharge of undissolved substance to or		
Organizational me				recover from onsite		
prevent/limit release from the site		Water		Risk from environmental exposure is driven by the freshwater.		
		Commoi estimate	n practices vary acro		rvative process re	ease
		Type of Sewage Treatment Plant		Domestic sewage treatment plant		
			e of sewage nt plant effluent	2.000 m3/d		
Conditions and me			ation efficiency	96,2 %		
to sewage treatme	ent plant		age removed ste water	96,2 %		
		Sludge ⁻	Freatment	Do not apply indus should be incinerat	ted, contained or i	eclaimed.
Conditions and measures related to external treatment of waste for disposal		Waste tr	eatment	External treatment and disposal of waste sho comply with applicable local and/or national regulations.		
Conditions and measures related to external recovery of waste		Recover	y Methods	ethods External recovery and recycling of waste sho comply with applicable local and/or national regulations.		
2.2 Contributing PROC8a, PROC			worker exposur	e for: PROC1, PR	ROC2, PROC3, I	PROC4,
	,		ration of the	Covers percentage	substance in the	product up to
		Substance in		Covers percentage substance in the product up to 100 % (unless stated differently).		
Product characteri	istics	Mixture/Article				
		Physical Form (at time of use)		liquid		
		Vapour pressure		0,5 - 10 kPa		
Frequency and du	ration of use	Frequency of use		8 hours/day		
Other operational affecting workers		Assumes uses at not more the differently.		than 20℃ above ambient tem perature, unless stated		
		(closed	exposures systems)	Handle substance within a closed system.(PROC1)		
Technical condition	ns and		exposures systems)	Handle substance within a closed system.(PROC2)		
measures to contro from source toward	•	General systems	exposures (closed	Handle substance within a closed system.(PROC3)		
		Storage		Store substance wi	thin a closed syste	em.
				Transfer via enclos	ed lines.(PROC1,	PROC2)
-	stimation and	referen	ce to its source			
Environment						
Contributing Scenario	Specific conditi	ons	Compartment	Value	Level of Exposure	RCR
				<u>Msafe</u>	620000 kg/day	
ESVOC spERC 1.	1b.v1 has been u	used to e	valuate the exposure	e for the environmer	nt.	
Workers						
	A tool has been u	ised to e	stimate workplace ex	cosures unless oth	erwise indicated	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.						

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4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

For further information on the assessment method, see: http://www.ecetoc.org/tra

Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

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		(re)packing of substances and mixtures
Main User Groups	SU 3: Industrial uses: Use	es of substances as such or in preparations at industrial
Postore of and use	sites	
Sectors of end-use	SU 10: Formulation	acces no likelihood of eveneure
	PROC2: Use in closed, co PROC3: Use in closed ba PROC4: Use in batch and exposure arises	ocess, no likelihood of exposure ontinuous process with occasional controlled exposure tch process (synthesis or formulation) of other process (synthesis) where opportunity for ag in batch processes for formulation of preparations
Process categories	d/or significant contact) stance or preparation (charging/discharging) from/to t non-dedicated facilities stance or preparation (charging/discharging) from/to t dedicated facilities tance or preparation into small containers (dedicated ng) reparations or articles by tabletting, compression, ory reagent	
Environmental Release Categories	ERC2: Formulation of pre	parations
2.1 Contributing scenario co		
	Maximum daily site	1200 kg/day
	tonnage (kg/day): Regional use tonnage (tons/year):	120 ton(s)/year
Amount used	Fraction of EU tonnage used in region:	0,1
	Fraction of regional tonnage used locally:	1
	Annual site tonnage (tons/year):	120 ton(s)/year
requency and duration of use	Continuous exposure	100 days/year
Environment factors not	Dilution Factor (River)	10
nfluenced by risk management	Dilution Factor (Coastal Areas)	100
	Emission or Release Factor: Air Emission or Release	2,5 .10-2
Other given operational onditions affecting	Factor: Water	2,0 .10-5
environmental exposure	Emission or Release Factor: Soil	1,0 .10-4
	initial release prior to RMM	
echnical conditions and neasures at process level	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 0 %)
source) to prevent release echnical onsite conditions and	Water	No wastewater treatment required.
neasures to reduce or limit	Water	If discharging to domestic sewage treatment plant,
ischarges, air emissions and	Mator	no onsite wastewater treatment required.
eleases to soil Organizational measures to	Water	Prevent discharge of undissolved substance to or
revent/limit release from the site		recover from onsite wastewater.
	Sediment	Risk from environmental exposure is driven by freshwater sediment.
	Common practices vary ac estimates used.	cross sites thus conservative process release

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according to 1907/2006 EU and 1272/2008 EU

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	Type of Sewage Treatment Plant	Domestic sewage treatment plant			
	Flow rate of sewage treatment plant effluent	2.000 m3/d			
Conditions and measures related	Degradation efficiency	96,2 %			
to sewage treatment plant	Percentage removed from waste water	96,2 %			
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.			
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.			
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.			
2.2 Contributing scenario cor PROC5, PROC8a, PROC8b, P		re for: PROC1, PROC2, PROC3, PROC4, 5			
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).			
Product characteristics	Physical Form (at time of use)	liquid			
	Vapour pressure	0,5 - 10 kPa			
Frequency and duration of use	Frequency of use	8 hours/day			
Other operational conditions affecting workers exposure	Assumes use at not more the differently.	nan 20 ℃ above ambient tem perature, unless stated			
	General exposures (closed systems)	Handle substance within a closed system.(PROC1)			
Technical conditions and	General exposures (closed systems)	Handle substance within a closed system.(PROC2)			
measures to control dispersion from source towards the worker	General exposures (closed systems)	Handle substance within a closed system.(PROC3)			
	Storage	Store substance within a closed system.(PROC1, PROC2)			
3. Exposure estimation and reference to its source Environment					

Contributing Scenario	Specific Conditions	Compartment	Value	Level of Exposure	refe
			Msafe	1300000 kg/day	

ESVOC spERC 2.2.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the **Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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		Product: PA1°-527/2			
1. Short title of Exposure Sc					
Main User Groups		of substances as such or in preparations at industria			
	PROC2: Use in closed, con PROC3: Use in closed batc PROC4: Use in batch and c	ess, no likelihood of exposure tinuous process with occasional controlled exposure h process (synthesis or formulation) other process (synthesis) where opportunity for			
Process categories	exposure arises PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process PROC18: Greasing at high energy conditions				
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC7: Industrial use of substances in closed systems				
2.1 Contributing scenario co					
	Maximum daily site tonnage (kg/day):	1200 kg/day			
	Regional use tonnage (tons/year):	24 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	1			
	Annual site tonnage (tons/year):	24 ton(s)/year			
Frequency and duration of use	Continuous exposure	20 days/year			
Environment factors not	Dilution Factor (River)	10			
influenced by risk management	Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	1,0 .10-2			
Other given operational conditions affecting	Emission or Release Factor: Water	3,0 .10-6			
environmental exposure	Emission or Release Factor: Soil	1,0 .10-3			
	initial release prior to RMM				
Technical conditions and measures at process level	Air	Treat air emission to provide a typical remonstrate ficiency of (%): (Efficiency: 70 %)			
(source) to prevent release	Water	No wastewater treatment required.			
Technical onsite conditions and measures to reduce or limit discharges, air emissions and	Water	If discharging to domestic sewage treatment plant, onsite wastewater treatment required.			
releases to soil Organizational measures to	Water	Prevent discharge of undissolved substance to or recover from onsite wastewater.			
prevent/limit release from the site	Sediment	Risk from environmental exposure is driven by freshwater sediment.			
	Common practices vary acroused.	oss sites thus conservative process release estimate			

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	Type of Sewage Treatment Plant	Domestic sewage treatment plant	
	Flow rate of sewage treatment plant effluent	2.000 m3/d	
Conditions and measures related	Degradation efficiency	96,2 %	
to sewage treatment plant	Percentage removed from waste water	96,2 %	
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.	
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.	
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.	
2.2 Contributing scenario cor PROC7, PROC8a, PROC8b, P		re for: PROC1, PROC2, PROC3, PROC4, 3, PROC17, PROC18	
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).	
Product characteristics	Physical Form (at time of use)	liquid	
	Vapour pressure	0,5 - 10 kPa	
Frequency and duration of use	Frequency of use	8 hours/day	
Other operational conditions affecting workers exposure	Assumes use at not more th differently.	an 20℃ above ambient temp erature, unless stated	
Technical conditions and measures to control dispersion from source towards the worker	Storage	Store substance within a closed system. (PROC1, PROC2)	
3. Exposure estimation and	reference to its source		

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	8500000 kg/day	

ESVOC spERC 4.6a.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment

	Safety Data S	heet E. u. P. Würtz Gn	nbH & Co. KG		
	according to 1907/ 2006 EU a	nd 1272/2008 EU Page: Date of Print / Revision: Product:	15 of 53 25-Jul-2018 PAT [®] -527/2		
1. Short title of Exposure Sce			anaumara)		
Main User Groups	PC1: Adhesives, sealants	vate households (= general public = c	onsumers)		
Chemical product category	PC24: Lubricants, greases, PC31: Polishes and wax ble				
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems				
2.1 Contributing scenario cor		xposure for: ERC8a, ERC8d, E	RC9a, ERC9b		
	tonnage (kg/day):	0,0068 kg/day			
	(tons/year):	5 ton(s)/year			
Amount used	used in region:	0,1			
	Fraction of regional tonnage used locally:	0,0005			
	Annual site tonnage (tons/year):	0,0025 ton(s)/year			
Frequency and duration of use	Continuous exposure	365 days/year			
Environment factors not	Dilution Factor (River)	10			
influenced by risk management	Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	4,0 .10-1 (ERC8a, ERC8d)			
	Emission or Release Factor: Water	5,0 .10-2 (ERC8a, ERC8d)			
	Emission or Release Factor: Soil	5,0 .10-2 (ERC8a, ERC8d)			
Other given operational conditions affecting	initial release prior to RMM (ERC8a, ERC8d)				
environmental exposure	Emission or Release Factor: Air	1,0 .10-2 (ERC9a, ERC9b)			
	Emission or Release Factor: Water	1,0 .10-2 (ERC9a, ERC9b)			
	Emission or Release Factor: Soil	1,0 .10-2 (ERC9a, ERC9b)			
	initial release prior to RMM (F	ERC9a, ERC9b)			
Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site		Risk from environmental exposure is freshwater.	driven by the		
	Type of Sewage Treatment Plant	Domestic sewage treatment plant			
Conditions and measures related to sewage treatment plant	Flow rate of sewage treatment plant effluent	2.000 m3/d			
	Percentage removed from waste water	96,2 %			
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of w comply with applicable local and/or r regulations.	ational		
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of w comply with applicable local and/or r regulations.			

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2.2 Contributing scenario cor		sure for: PC1: Glues, hobby use
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	9 g
	Frequency of use	365 days/year
Frequency and duration of use	Frequency of use	1 Times per day
i requeries and duration of dec	Exposure duration per event	240 min
risk management	Exposed skin areas	Covers skin contact area up to 35,73 cm ²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.
	ntrolling consumer expo	sure for: PC1: Glues DIY-use (carpet glue, tile
glue, wood parquet glue)		
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	6,39 kg
	Frequency of use	1 days/year
Frequency and duration of use	Frequency of use	1 Times per day
	Exposure duration per event	
risk management	Exposed skin areas	Covers skin contact area up to 110 cm ²
Other given operational conditions		20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.
2.4 Contributing scenario cor	ntrolling consumer expo	sure for: PC1: Glue from spray
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
	Physical Form (at time of use)	liquid
Amazanat was ad	Vapour pressure	> 10 Pa
	Amount used per event	85,05 g
	Frequency of use	6 days/year
Frequency and duration of use	Frequency of use	1 Times per day
	Exposure duration per event	
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 35,73 cm ²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related		No specific risk management measure identified beyond those operational conditions stated.

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2.5 Contributing scenario co	ntrolling consumer expo	sure for: PC1: Sealants		
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%		
Product characteristics	Physical Form (at time of use)	liquid		
	Vapour pressure	> 10 Pa		
Amount used	Amount used per event	75 g		
	Frequency of use	365 days/year		
Frequency and duration of use	Frequency of use	1 Times per day		
requeries and duration of asc	Exposure duration per event	60 min		
Human factors not influenced by risk management		Covers skin contact area up to 35,73	cm ²	
Other given operational conditions	Room size	20 m3		
affecting consumers exposure	Covers use under typical hou	sehold ventilation.		
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measur beyond those operational conditions	e identified stated.	
2.6 Contributing scenario cor	ntrolling consumer expo	sure for: PC24: Liquids		
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 100%		
Product characteristics	Physical Form (at time of use)	liquid		
	Vapour pressure	> 10 Pa		
Amount used	Amount used per event	2,2 kg		
Frequency and duration of use	. ,	4 days/year		
	Frequency of use	1 Times per day		
	Exposure duration per event			
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 468 c	m²	
Other given operational	Room size	34 m3		
conditions affecting consumers exposure	Covers use in a one car gara	ge (34m³) under typical ventilation.		
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measur beyond those operational conditions		
2.7 Contributing scenario cor	ntrolling consumer expo	sure for: PC24: Pastes		
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 20%		
Product characteristics	Physical Form (at time of use)	liquid		
	Vapour pressure	> 10 Pa		
Amount used	Amount used per event	34 g		
	Frequency of use	10 days/year		
Frequency and duration of use	Frequency of use	1 Times per day		
. requeries and duration of use	Exposure duration per event	360 min		
Human factors not influenced by risk management		Covers skin contact area up to 468 c	m²	
Other given operational	Room size	20 m3		
conditions affecting consumers exposure	Covers use under typical household ventilation.			
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measur beyond those operational conditions		

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2.8 Contributing scenario co	ntrolling consumer expo	sure for: PC24: Sprays				
	Concentration of the					
	Substance in Mixture/Article	Covers concentrations up to 50%				
Product characteristics	Physical Form (at time of use)	liquid				
	Vapour pressure	> 10 Pa				
Amount used	Amount used per event	73 g				
	Frequency of use	6 days/year				
Frequency and duration of use	Frequency of use	1 Times per day				
requericy and duration or use	Exposure duration per event	10,2 min				
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 428,75 cm²				
Other given operational	Room size	20 m3				
conditions affecting consumers	Covers use under typical hou	l Isehold ventilation				
exposure	Covers use under typical not	seriola vertilation.				
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.				
2.9 Contributing scenario co furniture, shoes)	ntrolling consumer expo	sure for: PC31: Polishes, wax / cream (floor,				
,	Concentration of the					
	Substance in Mixture/Article	Covers concentrations up to 50%				
Product characteristics	Physical Form (at time of use)	liquid				
	Vapour pressure	> 10 Pa				
Amount used	Amount used per event	142 g				
	Frequency of use	29 days/year				
Frequency and duration of use	Frequency of use	1 Times per day				
rrequericy and duration of use	Exposure duration per event	73 8 min				
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 430 cm ²				
Other given operational	Room size	20 m3				
conditions affecting consumers	Covers use under typical hou	sehold ventilation				
exposure	Covere des ander typical nee	-				
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.				
	controlling consumer ex	kposure for: PC31: Polishes, spray (furniture,				
shoes)	_					
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%				
Product characteristics	Physical Form (at time of use)	liquid				
	Vapour pressure	> 10 Pa				
Amount used	Amount used per event	35 g				
	Frequency of use	8 days/year				
Frequency and duration of use	Frequency of use	1 Times per day				
	Exposure duration per event	19,8 min				
Human factors not influenced by risk management.	Exposed skin areas	Covers skin contact area up to 430 cm ²				
Other given operational	Room size	20 m3				
conditions affecting consumers	Covers use under typical hou	sehold ventilation.				
exposure. Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.				
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3. Exposure estimation and reference to its source Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
ERC9a, ERC9b			Msafe	88 kg/day	

ESVOC spERC 8.6e.v1 has been used to evaluate the exposure for the environment. ESVOC spERC 9.6d.v1 has been used to evaluate the exposure for the environment.

Consumers

The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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		Product:	PAT [®] -527/2		
1. Short title of Exposure Sce			n advantice		
Main User Groups		Public domain (administratio	n, education,		
Process categories	entertainment, services, craftsmen) PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process PROC18: Greasing at high energy conditions PROC20: Heat and pressure transfer fluids in dispersive, professional use but				
Environmental Release	closed systems ERC8a: Wide dispersive in	door use of processing aids	in open systems		
Categories	ERC8d: Wide dispersive o ERC9a: Wide dispersive in	utdoor use of processing aids door use of substances in cl utdoor use of substances in c	s in open systems osed systems		
2.1 Contributing scenario cor	<u> </u>		<u> </u>		
	Maximum daily site tonnage (kg/day):	0,016 kg/day			
	Regional use tonnage (tons/year):	12 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	0,0005			
	Annual site tonnage (tons/year):	0,0059 ton(s)/year			
Frequency and duration of use	Continuous exposure	365 days/year			
Environment factors not influenced by risk management	Dilution Factor (River) Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	4,0 .10-1 (ERC8a, ERC8d))		
	Emission or Release Factor: Water	5,0 .10-2 (ERC8a, ERC8d))		
Other given operational	Emission or Release Factor: Soil	5,0 .10-2 (ERC8a, ERC8c	d)		
conditions affecting	initial release prior to RMM	(ERC8a, ERC8d)			
environmental exposure	Emission or Release Factor: Air	1,0 .10-2 (ERC9a, ERC9b))		
	Emission or Release Factor: Water	1,0 .10-2 (ERC9a, ERC9b))		
	Emission or Release Factor: Soil	1,0 .10-2 (ERC9a, ERC9b)	o)		
	initial release prior to RMM Air	(ERC9a, ERC9b) Treat air emission to provi	do a tunical removal		
Technical conditions and measures at process level		efficiency of (%): (Efficienc	ey: 0 %)		
(source) to prevent release	Water	No wastewater treatment r	<u> </u>		
Technical onsite conditions and	Water	~ ~	sewage treatment plant, no		
measures to reduce or limit discharges, air emissions and		onsite wastewater treatme	•		
releases to soil Organizational measures to	Water	Risk from environmental e freshwater.			
prevent/limit release from the site	Common practices vary across sites thus conservative process release estimates used.				

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	Type of Sewage Treatment Plant	Domestic sewage treatment plant
Conditions and measures related	Flow rate of sewage treatment plant effluent	2.000 m3/d
	Degradation efficiency	96,2 %
	Percentage removed from waste water	96,2 %
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to external treatment of waste for disposal		External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.
		e for: PROC1, PROC2, PROC3, PROC4, 13, PROC17, PROC18, PROC20
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).
	Physical Form (at time of use)	liquid
	Vapour pressure	0,5 - 10 kPa
Frequency and duration of use	Frequency of use	8 hours/day
•	Assumes use at no more that differently.	an 20 ℃ above ambient temp erature, unless stated
	General exposures (closed systems)	Handle substance within a closed system.(PROC1)
	General exposures (closed systems)	Handle substance within a closed system.(PROC2)
	General exposures (closed systems)	Handle substance within a closed system.(PROC3)
Technical conditions and measures to control dispersion from source towards the worker	Maintenance of small items Elevated temperature Non-dedicated facility	Drain down system prior to equipment break-in or maintenance. (PROC8a)
	Spraying	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). (PROC11)
	Storage	Store substance within a closed system. (PROC1, PROC2)

3. Exposure estimation and reference to its source Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Contributing Scenario	Specific Conditions	Compartment	Value	Level of Exposure	RCR
ERC8a, ERC8d			Msafe	170 kg/day	
ERC9a, ERC9b			Msafe	220 kg/day	

ESVOC spERC 8.6c.v1 has been used to evaluate the exposure for the environment. ESVOC spERC 9.6b.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce	nario 7· Uso as Functio	onal Fluids			
Main User Groups		es of substances as such or in preparations at industrial			
·	sites				
	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for				
Process categories	vessels/large containers a PROC8b: Transfer of sub vessels/large containers a	stance or preparation (charging/discharging) from/to t dedicated facilities			
	filling line, including weighi	<u></u>			
Environmental Release Categories	ERC7: Industrial use of st	ubstances in closed systems			
2.1 Contributing scenario co					
	Maximum daily site tonnage (kg/day):	250 kg/day			
	Regional use tonnage (tons/year):	5 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	1			
	Annual site tonnage (tons/year):	5 ton(s)/year			
Frequency and duration of use	Continuous exposure	20 days/year			
	Dilution Factor (River)	10			
Environment factors not influenced by risk management	Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	1,0 .10-2			
Other given operational conditions affecting	Emission or Release Factor: Water	3,0 .10-6			
environmental exposure	Emission or Release Factor: Soil	1,0 .10-3			
	initial release prior to RMM	1			
	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 0 %)			
Technical conditions and	Water	No wastewater treatment required.			
measures at process level (source) to prevent release Technical onsite conditions and	Water	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required			
measures to reduce or limit discharges, air emissions and	Water	Prevent discharge of undissolved substance to or recover from onsite wastewater			
releases to soil Organizational measures to	Sediment	Risk from environmental exposure is driven by the freshwater			
prevent/limit release from the site	Common practices vary across sites thus conservative process release estimates used.				
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Domestic sewage treatment plant			
to cowago treatment plant	Flow rate of sewage treatment plant effluent	2.000 m3/d			
	Degradation efficiency	96,2 %			
	Percentage removed from waste water	96,2 %			
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.			

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Conditions and m to external treatm disposal		Waste treatment		External treatment and disposal of waste should comply with applicable local and/or national regulations.			
Conditions and me to external recover		Recovery Methods		External recovery and recycling of waste should comply with applicable local and/or national regulations.			
2.2 Contributing PROC8a, PROC		ntrolling	worker exposur	e for: PROC1, PF	ROC2, PROC3, I	PROC4,	
	Concentration of the Substance in Mixture/Article		ce in	Covers percentage substance in the product up to 100 % (unless stated differently).			
		Physical Form (at time of use)		liquid			
		Vapour p	oressure	0,5 - 10 kPa			
Frequency and du	ration of use	Frequen	cy of use	8 hours/day			
Other operational affecting workers		Assumes differentl	s use at not more the	an 20℃ above ambi	ent temp erature,	unless stated	
Technical conditio measures to contr from source towar	ol dispersion	Storage on		Store substance within a closed system. (PROC1, PROC2)			
3. Exposure e	stimation and	referen	ce to its source				
Environment							
Contributing	Specific cond	itions	Compartment	Value	Level of	RCR	
Scenario	•		•		Exposure		
				Msafe	2700000 kg/day		

ESVOC spERC 7.13a.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce	nario 8: Use as Functior	nal Fluids			
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)				
Chemical product category	PC16: Heat transfer fluids				
	PC17: Hydraulic fluids				
Environmental Release		door use of substances in closed systems			
Categories	•	atdoor use of substances in closed systems			
2.1. Contributing scenario co					
	Maximum daily site tonnage (kg/day):	0,0027 kg/day			
	Regional use tonnage	2 ton(s)/year			
	(tons/year):				
Amountuped	Fraction of EU tonnage	0,1			
Amount used	used in region:				
	Fraction of regional	0,0005			
	tonnage used locally:				
	Annual site tonnage	0,001 ton(s)/year			
	(tons/year):				
Frequency and duration of use	Continuous exposure	365 days/year			
	Dilution Factor (River)	10			
Environment factors not influenced by risk management	Dilution Factor (Coastal	100			
Initidenced by fisk management	Areas)				
	Emission or Release	5,0 .10-2			
	Factor: Air	3,0 .10-2			
Other given operational	Emission or Release	2,5 .10-2			
conditions affecting	Factor: Water	2,3 . 10 2			
environmental exposure	Emission or Release Factor: Soil	2,5 .10-2			
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
- 1 . 1 . 10.	initial release prior to RMM	but a second			
Technical conditions and measures at process level	Water	Risk from environmental exposure is driven by the			
(source) to prevent release		freshwater			
Technical onsite conditions and					
measures to reduce or limit					
discharges, air emissions and releases to soil					
Organizational measures to					
prevent/limit release from the site					
	Type of Sewage				
	Treatment Plant	Domestic sewage treatment plant			
Conditions and measures related	Flow rate of sewage treatment plant effluent	2.000 m3/d			
to sewage treatment plant	Percentage removed				
	from waste water	96,2 %			
Conditions and measures related		External treatment and disposal of waste should			
to external treatment of waste fo	Waste treatment	comply with applicable local and/or national			
disposal		regulations.			
Conditions and measures related	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national			
to external recovery of waste	,	regulations.			
		F - G			

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	110duct. 1741 32172
ntrolling consumer expo	sure for: PC16, PC17
Concentration of the	Covers concentrations up to 100 %
Substance in Mixture/Article	
Physical Form (at time of use)	liquid
Vapour pressure	> 10 Pa
Amount used per event	2,2 kg
Frequency of use	4 days/year
Frequency of use	1 Times per day
Exposure duration per event	10,2 min
Exposed skin areas	Covers skin contact area up to 468 cm²
Room size	34 m3
Covers use in a one car gara	ge (34m³) under typical ventilation.
Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.
reference to its source	
	Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Frequency of use Exposure duration per event Exposed skin areas Room size Covers use in a one car gara Consumer Measures

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	40 kg/day	

ESVOC spERC 9.13c.v1 has been used to evaluate the exposure for the environment.

Consumers

The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce					
Main User Groups	SU 22: Professional uses: P	,	lministration, education	on,	
Process categories	entertainment, services, craftsmen) PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems				
Environmental Release Categories	ERC9a: Wide dispersive ind				
	ERC9b: Wide dispersive out			tems	
2.1 Contributing scenario cor		xposure for: 1 0,0055 kg/day	EKU98, EKU9D		
	tonnage (kg/day):				
	Regional use tonnage (tons/year):	4 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	0,0005			
	Annual site tonnage (tons/year):	0,002 ton(s)/yea	ır		
Frequency and duration of use	Continuous exposure	365 days/year			
Environment factors not	Dilution Factor (River)	10			
influenced by risk management	Dilution Factor (Coastal Areas)	100			
	i actor. All	5,0 .10-2			
Other given operational conditions affecting	Emission or Release Factor: Water	2,5 .10-2			
environmental exposure	Emission or Release Factor: Soil	2,5 .10-2			
	initial release prior to RMM				
Technical conditions and	Air	Treat air emission to provide a typical remove fficiency of (%): (Efficiency: 0 %)		al removal	
measures at process level (source) to prevent release	Water	No wastewater treatment required.			
Technical onsite conditions and measures to reduce or limit	Water		domestic sewage tre ter treatment require	•	
discharges, air emissions and releases to soil	Sediment	Risk from enviro freshwater.	onmental exposure is	driven by the	
Organizational measures to prevent/limit release from the site	Common practices vary across sites thus conservative process release estimates used.				
	Type of Sewage Treatment Plant	Domestic sewaç	ge treatment plant		
Conditions and measures related to sewage treatment plant	Flow rate of sewage treatment plant effluent	2.000 m3/d			
	,	96,2 %			
	Percentage removed from waste water	96,2 %			
	Sludge Treatment	Do not apply industrial sludge to natural soils., Sludge should be incinerated, contained or reclaimed.			
Conditions and measures related to external treatment of waste for disposal			ent and disposal of wa licable local and/or n		
Conditions and measures related to external recovery of waste	Recovery Methods		ry and recycling of wa licable local and/or n		

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2.2 Contributing scenario co PROC9, PROC20	ntrolling worker exposu	ire for: PROC1, PROC2, PROC3, PROC8a,	
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).	
Product characteristics	Physical Form (at time of use)	liquid	
	Vapour pressure	0,5 - 10 kPa	
Frequency and duration of use	Frequency of use	8 hours/day	
Other operational conditions affecting workers exposure			
Technical conditions and measures to control dispersion from source towards the worker	Storage	Store substance within a closed system. (PROC1, PROC2)	

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	77 kg/day	

ESVOC spERC 9.13b.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce	nario 10: Use in labora	atories				
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites					
Process categories	PROC10: Roller application	on or brushina				
	PROC15: Use as laboratory reagent					
	ERC2: Formulation of preparations					
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles					
2.1 Contributing scenario co	ntrolling environmenta	al exposure for: ERC2, ERC4				
	Maximum daily site tonnage (kg/day):	30 kg/day				
	Regional use tonnage (tons/year):	0,6 ton(s)/year				
Amount used	Fraction of EU tonnage used in region:	0,1				
	Fraction of regional tonnage used locally:	1				
	Annual site tonnage (tons/year):	0,6 ton(s)/year				
Frequency and duration of use	Continuous exposure	20 days/year				
	Dilution Factor (River)	10				
Environment factors not influenced by risk management	Dilution Factor (Coastal Areas)	100				
	Emission or Release Factor: Air	2,5 .10-2				
Other given operational conditions affecting	Emission or Release Factor: Water	2,0 .10-2				
environmental exposure	Emission or Release Factor: Soil	1,0 .10-4				
	initial release prior to RMM					
	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 0 %)				
Technical conditions and	Water	No wastewater treatment required.				
measures at process level (source) to prevent release	Water	If discharging to domestic sewage treatment plant, no				
Technical onsite conditions and		onsite wastewater treatment required.				
measures to reduce or limit discharges, air emissions and	Water	Prevent discharge of undissolved substance to or recover from onsite wastewater.				
releases to soil Organizational measures to prevent/limit release from the site	Sediment	Risk from environmental exposure is driven by freshwater sediment.				
F-0-10-11-11-11-11-11-11-11-11-11-11-11-1	Common practices vary across sites thus conservative process release estimates used.					
	Type of Sewage Treatment Plant	Domestic sewage treatment plant				
	Flow rate of sewage treatment plant effluent	2.000 m3/d				
Conditions and measures related	Degradation efficiency	96,2 %				
to sewage treatment plant	Percentage removed from waste water	96,2 %				
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed				
Conditions and measures relate to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.				
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.				

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		1.0000.					
2.2 Contributing scenario controlling worker exposure for: PROC10, PROC15							
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).					
Product characteristics	Physical Form (at time of use)	liquid					
	Vapour pressure	0,5 - 10 kPa					
Frequency and duration of use	Frequency of use	8 hours/day					
Other operational conditions affecting workers exposure	Assumes use at not more t differently.	han 20℃ above ambient temp erature, unless stated					

3. Exposure estimation and reference to its source Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			<u>Msafe</u>	1300 kg/day	

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce	nario 11: Use in laborat			
Main User Groups		Public domain (administration, education,		
Process categories	entertainment, services, cra PROC10: Roller application			
Frocess categories	PROC15: Use as laborator	-		
Environmental Release Categories		ndoor use of processing aids in open systems		
2.1 Contributing scenario cor	ntrolling environmental	exposure for: ERC8a		
- C	Maximum daily site tonnage (kg/day):	0,0011 kg/day		
	Regional use tonnage (tons/year):	0,8 ton(s)/year		
Amount used	Fraction of EU tonnage used in region:	0,1		
	Fraction of regional tonnage used locally:	0,0005		
	Annual site tonnage (tons/year):	0,0004 ton(s)/year		
Frequency and duration of use	Continuous exposure	365 days/year		
Environment factors not	Dilution Factor (River)	10		
influenced by risk management	Dilution Factor (Coastal Areas)	100		
	Emission or Release Factor: Air	5,0 .10-1		
Other given operational conditions affecting	Emission or Release Factor: Water	5,0 .10-1		
environmental exposure	Emission or Release Factor: Soil	0		
	initial release prior to RMM			
Technical conditions and	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 0 %)		
measures at process level (source) to prevent release	Water	No wastewater treatment required.		
Technical onsite conditions and	Water	If discharging to domestic sewage treatment plant, no		
measures to reduce or limit discharges, air emissions and		onsite wastewater treatment required		
releases to soil Organizational measures to	Water	Risk from environmental exposure is driven by freshwater.		
prevent/limit release from the site	Common practices vary across sites thus conservative process release estimates used.			
	Type of Sewage Treatment Plant	Domestic sewage treatment plant		
	Flow rate of sewage treatment plant effluent	2.000 m3/d		
Conditions and measures related	Degradation efficiency	96,2 %		
to sewage treatment plant	Percentage removed from waste water	96,2 %		
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludg should be incinerated, contained or reclaimed.		
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.		
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.		

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2.2 Contributing scenario co	.2 Contributing scenario controlling worker exposure for: PROC10, PROC15					
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).				
Product characteristics	Physical Form (at time of use)	liquid				
	Vapour pressure	0,5 - 10 kPa				
Frequency and duration of use	Frequency of use	8 hours/day				
Other operational conditions Assumes use at not more than 20°C above ambient temp erature, unla affecting workers exposure differently.		an 20℃ above ambient temp erature, unless stated				

3. Exposure estimation and reference to its source Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	13 kg/day	

ESVOC spERC 8.17.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sco	enario 12: Use in metal	working fluids / rolling oils			
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites				
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process				
Environmental Release Categories	ERC4: Industrial use of pripart of articles	rocessing aids in processes and products, not becoming			
2.1 Contributing scenario co	ntrolling environmenta	exposure for: ERC4			
	Maximum daily site tonnage (kg/day):	740 kg/day			
	Regional use tonnage (tons/year):	15 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	1			
	Annual site tonnage (tons/year):	15 ton(s)/year			
Frequency and duration of use	Continuous exposure	20 days/year			
For income and to allow the state of	Dilution Factor (River)	10			
Environment factors not influenced by risk management	Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	2,0 .10-2			
Other given operational conditions affecting	Emission or Release Factor: Water	3,0 .10-6			
environmental exposure	Emission or Release Factor: Soil	0			
	initial release prior to RMM	1			
Technical conditions and	Air	Treat air emission to provide a typical remova efficiency of (%): (Efficiency: 70 %)			
measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	No wastewater treatment required.			
	Water	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.			
	Water	Prevent discharge of undissolved substance to or recover from onsite wastewater.			
	Sediment	Risk from environmental exposure is driven by freshwater sediment.			
	Common practices vary acused.	cross sites thus conservative process release estimates			

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	Type of Sewage Treatment Plant	Domestic sewage treatment plant				
	Flow rate of sewage treatment plant effluent	2.000 m3/d				
Conditions and measures related	Degradation efficiency	96,2 %				
to sewage treatment plant	Percentage removed from waste water	96,2 %				
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.				
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.				
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.				
2.2 Contributing scenario cor PROC5, PROC7, PROC8a, PR	ntrolling worker expo	osure for: PROC1, PROC2, PROC3, PROC4, C10, PROC13, PROC17				
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).				
Product characteristics	Physical Form (at time ouse)	of liquid				
	Vapour pressure	0,5 - 10 kPa				
Frequency and duration of use	Frequency of use	8 hours/day				
Other operational conditions		e than 20 °C above ambient temp erature, unless stated				
affecting workers exposure	differently.					
	General exposures (closed systems)	Handle substance within a closed system.(PROC1)				
	General exposures (closed systems)	Handle substance within a closed system.(PROC2)				
Technical conditions and measures to control dispersion	General exposures (closed systems)	Handle substance within a closed system.(PROC3)				
from source towards the worker	Bulk transfers	Clear transfer lines prior to de-coupling.(PROC8b)				
	Treatment by dipping an pouring	Allow time for product to drain from workpiece. (PROC13)				
	Storage	Store substance within a closed system. Transfer via enclosed lines. (PROC1, PROC2)				
3. Exposure estimation and	reference to its sour	ce				
Environment .						
Contributing Specific Cond	litions Compartmen	Exposure				
		Msafe 8500000 kg/day				
ESVOC spERC 4.7a.v1 has been	used to evaluate the expo	osure for the environment.				
Workers						
The ECETOC TRA tool has been u	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.					

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce	enario 13: Use in metal	working fluids / rolling oils		
Main User Groups	SU 22: Professional uses: Public domain (administration, education,			
	entertainment, services, craftsmen) PROC1: Use in closed process, no likelihood of exposure			
	PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC8a: Transfer of substance or preparation (charging/discharging) from/to			
D	vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to			
Process categories	vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicate filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process			
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems			
2.1 Contributing scenario co	ntrolling environmental	exposure for: ERC8a, ERC8d		
Amount used	Maximum daily site tonnage (kg/day):	0,01 kg/day		
	Regional use tonnage (tons/year):	7,4 ton(s)/year		
	Fraction of EU tonnage used in region:	0,1		
	Fraction of regional tonnage used locally:	0,0005		
	Annual site tonnage (tons/year):	0,0037 ton(s)/year		
Frequency and duration of use	Continuous exposure	365 days/year		
Environment factors not influenced by risk management	Dilution Factor (River)	10		
	Dilution Factor (Coastal Areas)	100		
	Emission or Release Factor: Air	4,0 .10-1		
Other given operational conditions affecting	Emission or Release Factor: Water	5,0 .10-2		
environmental exposure	Emission or Release Factor: Soil	5,0 .10-2		
	initial release prior to RMM			
Technical conditions and	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 0 %)		
measures at process level (source) to prevent release	Water	No wastewater treatment required.		
Technical onsite conditions and	Water	If discharging to domestic sewage treatment plant,		
measures to reduce or limit	Water	no onsite wastewater treatment required. Risk from environmental exposure is driven by the		
discharges, air emissions and releases to soil		freshwater.		
Organizational measures to prevent/limit release from the site	Common practices vary across sites thus conservative process release estimates used.			
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Domestic sewage treatment plant		
	Flow rate of sewage treatment plant effluent	2.000 m3/d		
	Degradation efficiency	96,2 %		
	Percentage removed from waste water	96,2 %		
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.		

according to 1907/2006 EU and 1272/2008 EU

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Conditions and measures relate to external treatment of waste for disposal		External treatment and disposal of waste should comply with applicable local and/or national regulations.			
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.			
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17					
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).			
	Physical Form (at time of use)	liquid			
	Vapour pressure	0,5 - 10 kPa			
Frequency and duration of use	Frequency of use	8 hours/day			
Other operational conditions affecting workers exposure	Assumes use at not more than 20 ℃ above ambient tem perature, unless stated differently.				
Technical conditions and measures to control dispersion from source towards the worker	General exposures (closed systems)	Handle substance within a closed system.(PROC1)			
	General exposures (closed systems)	Handle substance within a closed system.(PROC2)			
	General exposures (closed systems)	Handle substance within a closed system.(PROC3)			
	Spraying	Provide a good standard of general ventilation (not			
		less than 3 to 5 air changes per hour).(PROC11)			
	Storage	Store substance within a closed system.(PROC1,			
		PROC2)			

3. Exposure estimation and reference to its source Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	120 kg/day	

ESVOC spERC 8.7c.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

For further information on the assessment method, see: http://www.ecetoc.org/tra

Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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		Product:	PAT®-527/2		
1. Short title of Exposure Sce					
Main User Groups	SU 3: Industrial uses: Use	es of substances as such or in pro	eparations at industrial		
	sites				
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation				
	PROC15: Use as laboratory reagent				
Environmental Release Categories	ERC4: Industrial use of pr part of articles	ocessing aids in processes and p	products, not becoming		
2.1 Contributing scenario co	ntrolling environmental	exposure for: ERC4			
	Maximum daily site tonnage (kg/day):	15000 kg/day			
	Regional use tonnage (tons/year):	300 ton(s)/year			
Amount used	Fraction of EU tonnage used in region:	0,1			
	Fraction of regional tonnage used locally:	1			
	Annual site tonnage (tons/year):	300 ton(s)/year			
Frequency and duration of use	Continuous exposure	20 days/year			
For discourant for stone and	Dilution Factor (River)	10			
Environment factors not influenced by risk management	Dilution Factor (Coastal Areas)	100			
	Emission or Release Factor: Air	9,8 .10-1			
Other given operational conditions affecting environmental exposure	Emission or Release Factor: Water	7,0 .10-5			
	Emission or Release Factor: Soil	0			
	initial release prior to RMM				
Technical conditions and measures at process level	Air	Treat air emission to provide a efficiency of (%): (Efficiency: 9	0 %)		
(source) to prevent release	Water	If discharging to domestic sew			
Technical onsite conditions and		onsite wastewater treatment r	equired.		
measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Water	Treat onsite wastewater (prior discharge) to provide the requ	ired removal		
	Water	efficiency of (%): (Degradation Prevent discharge of undissol	ved substance to or		
	Sediment	recover from onsite wastewater Risk from environmental exposure is driven by			
	freshwater sediment. Common practices vary across sites thus conservative process release				
	estimates used.				

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			11000		
	Type of S Treatme		Domestic sewage t	reatment plant	
		e of sewage t plant effluent	2.000 m3/d	2.000 m3/d	
Conditions and measures related	Degrada	tion efficiency	96,2 %		
to sewage treatment plant	Percentage removed from waste water		96,2 %		
	Sludge 1	reatment	Do not apply indus should be incinerat		
Conditions and measures related to external treatment of waste for disposal	Waste tr	eatment	External treatment comply with applica regulations.		
Conditions and measures related to external recovery of waste	Recover	y Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.		
2.2 Contributing scenario cor PROC5, PROC7, PROC8a, PR	ntrolling OC8b, F	worker exposur PROC9, PROC10,	e for: PROC1, PR PROC13, PROC	ROC2, PROC3, I 14, PROC15	PROC4,
	Concent Substan Mixture/		Covers percentage substance in the product up to 00 % (unless stated differently).		
Product characteristics	Physical use)	Form (at time of	liquid		
	Vapour p	oressure	0,5 - 10 kPa		
Frequency and duration of use	Frequen	cy of use	8 hours/day		
Other operational conditions affecting workers exposure	Assume: different		nan 20 ℃ above ambient temp erature, unless stated		unless stated
	General (closed s	exposures systems)	Handle substance within a closed system.(PROC1)		
Technical conditions and measures to control dispersion from source towards the worker	(closed s	exposures systems) ple collection	Handle substance within a closed system.(PROC2)		stem.(PROC2)
	Material	transfers	Clear transfer lines prior to de-coupling.(PROC8a)		
	Material	transfers	Clear transfer lines	prior to de-couplir	ng.(PROC8b)
3. Exposure estimation and Environment	referen	ce to its source			
Contributing Specific conditi	ons	Compartment	Value	Level of Exposure	RCR
			Msafe	370000 kg/day	
ESVOC spERC 4.3a.v1 has been	used to e	valuate the exposure			I

ESVOC spERC 4.3a.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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1. Short title of Exposure Sce				
Main User Groups		rate households (= general public =	consumers)	
Chemical product category	PC1: Adhesives, sealants PC4: Anti-freeze and de-icing products PC8: Biocidal products PC9a: Coatings and paints, thinners, paint removers PC9b: Fillers, putties, plasters, modelling clay PC9c: Finger paints PC15: Non-metal-surface treatment products PC18: Ink and toners PC23: Leather tanning, dye, finishing, impregnation and care products PC24: Lubricants, greases, release products PC31: Polishes and wax blends PC34: Textile dyes, finishing and impregnating products			
Environmental Release		oor use of processing aids in open		
Categories	· ·	door use of processing aids in oper	systems	
2.1 Contributing scenario cor				
	Maximum daily site tonnage (kg/day):	0,055 kg/day		
	Regional use tonnage (tons/year):	40 ton(s)/year		
Amount used	Fraction of EU tonnage used in region:	0,1		
	Fraction of regional tonnage used locally:	0,0005		
	Annual site tonnage (tons/year):	0,02 ton(s)/year		
Frequency and duration of use	Continuous exposure	365 days/year		
	Dilution Factor (River)	10		
Environment factors not influenced by risk management	Dilution Factor (Coastal Areas)	100		
	Emission or Release Factor: Air	9,9 .10-1		
Other given operational conditions affecting	Emission or Release Factor: Water	1,0 .10-2		
environmental exposure	Emission or Release Factor: Soil	5,0 .10-3		
	initial release prior to RMM			
Technical conditions and measures at process level (source) to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site		Risk from environmental exposure i freshwater.	s driven by the	
	Type of Sewage Treatment Plant	Domestic sewage treatment plant		
Conditions and measures related to sewage treatment plant	Flow rate of sewage treatment plant effluent	2.000 m3/d		
	Percentage removed from waste water	96,2 %		
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of comply with applicable local and/or regulations.	national	
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of v comply with applicable local and/or regulations.		

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		Product: PAT®-527/2
2.2 Contributing scenario cor	ntrolling consumer expos	sure for: PC1: Glues, hobby use
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	9 g
	Frequency of use	365 days/year
Frequency and duration of use	Frequency of use	1 Times per day
	Exposure duration per event	
Human factors not influenced by risk management	-	Covers skin contact area up to 35,73 cm ²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	sehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.
	ntrolling consumer expos	sure for: PC1: Glues DIY-use (carpet glue,
tile glue, wood parquet glue)	1-	
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used		6,39 kg
	Frequency of use	1 days/year
Frequency and duration of use	Frequency of use	1 Times per day
	Exposure duration per event	
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 110 cm ²
Other given operational conditions		20 m3
affecting consumers exposure	Covers use under typical hou	I
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.
	ntrolling consumer expos	sure for: PC1: Glue from spray
Due do et els energiation		Covers concentrations up to 30%
Product characteristics	Substance in Mixture/Article Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used		85,05 g
	•	6 days/year
Frequency and duration of use	Frequency of use	1 Times per day
Frequency and duration of use	Exposure duration per event	
Human factors not influenced by risk management		Covers skin contact area up to 35,73 cm ²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related		No enecific rick management measure identified
to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.

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2.5 Contributing scenario cor		sure for: PC1: Sealants	
	Concentration of the Substance in	Covers concentrations up to 30%	
	Mixture/Article	Covers concentrations up to 50%	
Product characteristics	Physical Form (at time of		
	use)	liquid	
	Vapour pressure	> 10 Pa	
Amount used	Amount used per event	75 g	
	Frequency of use	365 days/year	
Frequency and duration of use	Frequency of use	1 Times per day	
. ,	Exposure duration per event	60 min	
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 35,7	3 cm ²
Other given operational conditions	Room size	20 m3	
affecting consumers exposure	Covers use under typical hou	sehold ventilation.	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management meas beyond those operational conditions	
2.6 Contributing scenario o		oosure for: PC8: Cleaners, liqu	ıids
	Concentration of the	Covers concentrations up to 5%	
D	Mixture/Article	Covers concentrations up to 5%	
Product characteristics	Physical Form (at time of use)	liquid	
	Vapour pressure	> 10 Pa	
Amount used	Amount used per event	27 g	
	Frequency of use	128 days/year	
Frequency and duration of use	Frequency of use	1 Times per day	
requestey and datation of doc	Exposure duration per event	19,8 min	
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 857,	5 cm ²
Other given operational conditions	Room size	20 m3	
affecting consumers exposure	Covers use under typical hou	ı. Jsehold ventilation.	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management meas beyond those operational conditions	
2.7 Contributing scenario o	ontrolling consumer exp	oosure for: PC8: Cleaners, trig	ger sprays
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 15%	
Product characteristics	Physical Form (at time of use)	liquid	
	Vapour pressure	> 10 Pa	
Amount used	Amount used per event	35 g	
	Frequency of use	128 days/year	
requency and duration of use	Frequency of use	1 Times per day	
Human factors not influenced by	Exposure duration per event Exposed skin areas	10,2 min Covers skin contact area up to 428	cm²
risk management	Doom oize	20 m2	
Other given operational conditions affecting consumers exposure	Room size Covers use under typical hou	20 m3 Isehold ventilation	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal		No specific risk management measi beyond those operational conditions	
protection and hygiene)			
2.8 Contributing scenario o water borne paint, PC15: Solv		oosure for: PC9a: Solvent richer borne paint	, high solid,
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 27,5%	

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	Physical Form (at time of use)	liquid
		> 10 Pa
Amount used		744 g
	·	6 days/year
	• •	1 Times per day
Frequency and duration of use	Exposure duration per event	
Human factors not influenced by risk management		Covers skin contact area up to 428,75 cm ²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.
2.9 Contributing scenario o Aerosol spray can	ontrolling consumer exp	oosure for: PC9a: Aerosol spray can, PC15:
Acrosol Spray Call	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	215 g
	Frequency of use	2 days/year
Frequency and duration of use	Frequency of use	1 Times per day
requeries and duration of use	Exposure duration per event	19,8 min
Human factors not influenced by risk management		Covers skin contact area up to 857,5 cm²
Other given operational conditions	Room size	34 m3
affecting consumers exposure	Covers use in a one car gara	ge (34m³) under typical ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal	No specific risk management measure identific beyond those operational conditions stated.	
protection and hygiene)	controlling consumer ex	posure for: PC9a: Removers (paint-, glue-,
protection and hygiene) 2.10 Contributing scenario		rposure for: PC9a: Removers (paint-, glue-, -, glue-, wall paper-, sealant remover)
protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover)	, PC15: Removers (paint Concentration of the	
protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover)	, PC15: Removers (paint Concentration of the Substance in	-, glue-, wall paper-, sealant remover)
orotection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover)	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use)	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50%
orotection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid
protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa
protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g
protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day
Protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used Frequency and duration of use Human factors not influenced by risk management	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Exposure duration per event Exposed skin areas	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day 120 min Covers skin contact area up to 857,5 cm²
Protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used Frequency and duration of use Human factors not influenced by risk management Other given operational conditions	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Exposure duration per event Exposed skin areas	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day 120 min
Protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used Frequency and duration of use Human factors not influenced by risk management Other given operational conditions	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Exposure duration per event Exposed skin areas	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day 120 min Covers skin contact area up to 857,5 cm²
Product characteristics Amount used Human factors not influenced by risk management Other given operational conditions affecting consumers exposure Conditions and measures related to protection of consumer (e.g. personal	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Frequency of use Exposure duration per event Exposed skin areas Room size Covers use under typical hou	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day 120 min Covers skin contact area up to 857,5 cm²
Protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used Frequency and duration of use Human factors not influenced by risk management Other given operational conditions affecting consumers exposure Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Frequency of use Exposure duration per event Exposed skin areas Room size Covers use under typical hou	-, glue-, wall paper-, sealant remover) Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day 120 min Covers skin contact area up to 857,5 cm² 20 m3 usehold ventilation. No specific risk management measure identified
Protection and hygiene) 2.10 Contributing scenario wall paper-, sealant-remover) Product characteristics Amount used Frequency and duration of use Human factors not influenced by risk management Other given operational conditions affecting consumers exposure Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	, PC15: Removers (paint Concentration of the Substance in Mixture/Article Physical Form (at time of use) Vapour pressure Amount used per event Frequency of use Frequency of use Exposure duration per event Exposed skin areas Room size Covers use under typical hou	Covers concentrations up to 50% liquid > 10 Pa 491 g 3 days/year 1 Times per day 120 min Covers skin contact area up to 857,5 cm² 20 m3 usehold ventilation. No specific risk management measure identified beyond those operational conditions stated.

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I	Vapour pressure	> 10 Pa	
Amount used		85 g	
y uned it deed	Frequency of use	12 days/year	
		1 Times per day	
Frequency and duration of use	Exposure duration per event		
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 35,73 cm ²	
Other given operational conditions	Room size	20 m3	
affecting consumers exposure	Covers use under typical hou	usehold ventilation.	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.	
2.12 Contributing scenario	controlling consumer ex	posure for: PC18	
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 10%	
Product characteristics	Physical Form (at time of use)	liquid	
	Vapour pressure	> 10 Pa	
Amount used	•	40 g	
		365 days/year	
Frequency and duration of use	Frequency of use	1 Times per day	
requeries and daragement acc	Exposure duration per event	132 min	
Human factors not influenced by risk management		Covers skin contact area up to 71,4 cm ²	
Other given operational conditions	Room size	20 m3	
affecting consumers exposure	Covers use under typical hou	usehold ventilation.	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.	
2.13 Contributing scenario (floor, furniture, shoes)	controlling consumer ex	cposure for: PC23: Polishes, wax/cream	
Product characteristics	Mixture/Article	Covers concentrations up to 50%	
	Physical Form (at time of use)	liquid	
		> 10 Pa	
Amount used	·	56 g	
		29 days/year	
Frequency and duration of use	Frequency of use	1 Times per day	
	Exposure duration per event		
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 430 cm ²	
Other given operational conditions affecting consumers exposure		20 m3	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		usehold ventilation. No specific risk management measure identified beyond those operational conditions stated.	
2.14 Contributing scenario	controlling consumer ex	posure for: PC23: Polishes, spray (furniture,	
Shoes)	Mixture/Article	Covers concentrations up to 50%	
Product characteristics	Physical Form (at time of use)	liquid	
A second second	Vapour pressure	> 10 Pa	
Amount used	Amount used per event	56 g	

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	Frequency of use	8 days/year
	• •	
Frequency and duration of use		1 Times per day
	Exposure duration per event	
Human factors not influenced by risk management	•	Covers skin contact area up to 430 cm ²
Other given operational conditions		20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.
	controlling consumer ex	posure for: PC24: Liquids
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 100%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	2,2 kg
	Frequency of use	4 days/year
Fraguency and duration of use	Frequency of use	1 Times per day
Frequency and duration of use	Exposure duration per event	
Human factors not influenced by risk management		Covers skin contact area up to 468 cm ²
Other given operational conditions	Room size	34 m3
affecting consumers exposure		ı ıge (34m³) under typical ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.
	controlling consumer ex	posure for: PC24: Pastes
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 20%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	34 g
	Frequency of use	10 days/year
Frequency and duration of use	Frequency of use	1 Times per day
l requeitey and duration of use	Exposure duration per event	360 min
Human factors not influenced by risk management		Covers skin contact area up to 468 cm²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and bygiene)		No specific risk management measure identified beyond those operational conditions stated.
protection and hygiene) 2.17 Contributing scenario	controlling consumer ex	L oposure for: PC24: Sprays
L. 17 Continuum g scenario	Concentration of the	podaro for. i Oza. Opiaya
Donate de la contraction de la	Substance in Mixture/Article	Covers concentrations up to 50%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	73 g
	Frequency of use	6 days/year
İ	Frequency of use	1 Times per day
Frequency and duration of use	Exposure duration per event	

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h	l -	lo 1: 4 400 75 0
risk management		Covers skin contact area up to 428,75 cm ²
Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	usehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.
2.18 Contributing scenario	controlling consumer ex	posure for: PC31: Polishes, wax / cream
(floor, furniture, shoes)	_	
Product characteristics	Concentration of the	Covers concentrations up to 50%
	Substance in Mixture/Article	
	Physical Form (at time of	
	use)	liquid
	• •	> 10 Pa
Amount used	· ·	142 g
	Frequency of use	29 days/year
Frequency and duration of use	Frequency of use	1 Times per day
	Exposure duration per event	73,8 min
	-	Covers skin contact area up to 430 cm²
risk management	_	
Other given operational conditions		20 m3
affecting consumers exposure	Covers use under typical hou	sehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	No specific risk management measure identified beyond those operational conditions stated.
2.19 Contributing scenario	controlling consumer ex	posure for: PC31: Polishes, spray (furniture,
shoes)		
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
Product characteristics	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 Pa
Amount used	Amount used per event	35 g
	Frequency of use	8 days/year
Fragues and duration of use	Frequency of use	1 Times per day
Frequency and duration of use	Exposure duration per event	19.8 min
		Covers skin contact area up to 430 cm²
risk management		
Other given operational conditions		20 m3
affecting consumers exposure	Covers use under typical hou	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.
	controlling consumer ex	posure for: PC34
	Concentration of the Substance in Mixture/Article	Covers concentrations up to 10%
Product characteristics	Physical Form (at time of use)	liquid
		> 10 Pa
Amount used	· ·	115 g
	Frequency of use	365 days/year
Frequency and duration of use	Frequency of use	1 Times per day
	Exposure duration per event	60 min
Human factors not influenced by risk management	Exposed skin areas	Covers skin contact area up to 857,5 cm²

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Other given operational conditions	Room size	20 m3
affecting consumers exposure	Covers use under typical hou	sehold ventilation.
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)		No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	640 kg/day	

ESVOC spERC 8.3c.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the **Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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Product: PAT®-527/2

		Product: PAT-521/2		
1. Short title of Exposure Sce				
Main User Groups		Public domain (administration, education,		
Process categories	entertainment, services, craftsmen) PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available			
Environmental Release		door use of processing aids in open systems		
Categories	ERC8d: Wide dispersive ou	utdoor use of processing aids in open systems		
2.1 Contributing scenario co		exposure for: ERC8a, ERC8d		
	Maximum daily site tonnage (kg/day):	0,36 kg/day		
	Regional use tonnage (tons/year):	260 ton(s)/year		
Amount used	Fraction of EU tonnage used in region:	0,1		
	Fraction of regional tonnage used locally:	0,0005		
	Annual site tonnage (tons/year):	0,13 ton(s)/year		
Frequency and duration of use	Continuous exposure	365 days/year		
Environment factors not	Dilution Factor (River)	10		
influenced by risk management	Dilution Factor (Coastal Areas)	100		
	Emission or Release Factor: Air	9,8 .10-1		
Other given operational conditions affecting	Emission or Release Factor: Water	1,0 .10-2		
environmental exposure	Emission or Release Factor: Soil	1,0 .10-2		
	initial release prior to RMM Air	Treat air emission to provide a typical removal		
Technical conditions and measures at process level		efficiency of (%): (Efficiency: 0 %)		
(source) to prevent release	Water Water	No wastewater treatment required. If discharging to domestic sewage treatment plant,		
Technical onsite conditions and measures to reduce or limit		no onsite wastewater treatment required.		
discharges, air emissions and	Soil	Risk from environmental exposure is driven by soil.		
releases to soil Organizational measures to prevent/limit release from the site	Common practices vary acroestimates used.	oss sites thus conservative process release		
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Domestic sewage treatment plant		
	Flow rate of sewage treatment plant effluent	2.000 m3/d		
	Degradation efficiency	96,2 %		
	Percentage removed from waste water	96,2 %		
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.		

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Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.		
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.		
2.2 Contributing scenario cor PROC5, PROC8a, PROC8b, P				PROC4,
	Concentration of the Substance in Mixture/Article	Covers percentage	Covers percentage substance in the product up to 100 % (unless stated differently).	
Product characteristics	Physical Form (at time of use)	liquid		
	Vapour pressure	0,5 - 10 kPa		
Frequency and duration of use	Frequency of use	8 hours/day		
Other operational conditions	Outdoor (PROC11)			
affecting workers exposure	Assumes use at not more the differently.	nan 20 ℃ above aml	oient tem perature	, unless stated
	General exposures (closed systems)	Handle substance	Handle substance within a closed system.(PROC1)	
	Filling / preparation of equipment from drums or containers	Handle substance	within a closed sys	stem.(PROC2)
Technical conditions and measures to control dispersion from source towards the worker	General exposures (closed systems) Use in contained systems	Handle substance within a closed system.(PROC2)		stem.(PROC2)
nome desired tomarde and monte.	Manual Spraying Indoor.	Provide a good star less than 3 to 5 air		
	Manual Spraying Outdoor. Provide a good standard of general ventilation (r			
3. Exposure estimation and	reference to its source			
Environment				
Contributing Specific cond Scenario	itions Compartment	Value	Level of Exposure	RCR
		Msafe	2400 kg/day	
ESVOC spERC 8.3b.v1 has been ι	used to evaluate the exposur	e for the environmen	nt.	
Workers				

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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		Product: PAT-521/2		
 Short title of Exposure Sce Main User Groups 		s and release agents s of substances as such or in preparations at industrial		
Main Oddi Croupo	sites PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC6: Calendering operations PROC7: Industrial spraying PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tabletting, compression,			
Process categories				
	extrusion, pelletisation			
Environmental Release Categories	ERC4: Industrial use of propart of articles	ocessing aids in processes and products, not becoming		
2.1 Contributing scenario cor				
	Maximum daily site tonnage (kg/day):	1700 kg/day		
	Regional use tonnage (tons/year):	35 ton(s)/year		
Amount used	Fraction of EU tonnage used in region:	0,1		
	Fraction of regional tonnage used locally:	1		
	Annual site tonnage (tons/year):	35 ton(s)/year		
Frequency and duration of use	Continuous exposure	20 days/year		
Environment factors not	Dilution Factor (River)	10		
influenced by risk management	Dilution Factor (Coastal Areas)	100		
	Emission or Release Factor: Air Emission or Release	1,0		
Other given operational conditions affecting	Factor: Water	3,0 .10-7		
environmental exposure	Emission or Release Factor: Soil	0		
	initial release prior to RMM Air	Treat air emission to provide a typical remova		
Technical conditions and		efficiency of (%): (Efficiency: 80 %)		
measures at process level	Water	No wastewater treatment required.		
(source) to prevent release Technical onsite conditions and	Water	If discharging to domestic sewage treatment plant,		
measures to reduce or limit	Water	no onsite wastewater treatment required. Prevent discharge of undissolved substance to or		
discharges, air emissions and releases to soil	- Valor	recover from onsite wastewater.		
Organizational measures to	Soil	Risk from environmental exposure is driven by soil.		
prevent/limit release from the site	Common practices vary across sites thus conservative process release estimates used.			
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Domestic sewage treatment plant		
	Flow rate of sewage treatment plant effluent	2.000 m3/d		
	Degradation efficiency	96,2 %		
	Percentage removed from waste water	96,2 %		
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.		
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.		

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Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.	
2.2 Contributing scenario co PROC6, PROC7, PROC8b, PR		re for: PROC1, PROC2, PROC3, PROC4,	
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).	
Product characteristics	Physical Form (at time of use)	liquid	
	Vapour pressure	0,5 - 10 kPa	
Frequency and duration of use	Frequency of use	8 hours/day	
Other operational conditions affecting workers exposure	Assumes use at not more the differently.	nan 20℃ above ambient temp erature, unless stated	
Technical conditions and measures to control dispersion from source towards the worker	Storage	Store substance within a closed system. (PROC1, PROC2)	
3. Exposure estimation and	reference to its source		

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	19000000 kg/day	

ESVOC spERC 4.10a.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the **Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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Product: PAT®-527/2

		Product:	PAT [®] -527/2
1. Short title of Exposure Sce			
Main User Groups		Public domain (administration, educa	tion,
Process categories Environmental Release	PROC2: Use in closed, comprocate Use in closed batch and of exposure arises PROC6: Calendering opera PROC8a: Transfer of substances vessels/large containers at the PROC8b: Transfer of substances used of processels/large containers at the PROC10: Roller application PROC11: Non industrial spread of processels, pelletisation of preextrusion, pelletisation	ess, no likelihood of exposure tinuous process with occasional con h process (synthesis or formulation) ther process (synthesis) where oppositions ance or preparation (charging/dischargnee or preparation (charging/dischargnee or preparation (charging/dischargnee or preparation (charging/dischargnee) the process of the p	ortunity for arging) from/to arging) from/to empression,
Environmental Release Categories		loor use of processing aids in open a tdoor use of processing aids in oper	
2.1 Contributing scenario cor		•	
	Maximum daily site	0,00082 kg/day	
	tonnage (kg/day):		
	Regional use tonnage (tons/year):	0,6 ton(s)/year	
Amount used	Fraction of EU tonnage used in region:	0,1	
	Fraction of regional tonnage used locally:	0,0005	
_	Annual site tonnage (tons/year):	0,0003 ton(s)/year	
Frequency and duration of use	Continuous exposure	365 days/year	
Environment factors not	Dilution Factor (River)	10	
influenced by risk management	Dilution Factor (Coastal Areas)	100	
	Emission or Release Factor: Air Emission or Release	9,5 .10-1	
Other given operational conditions affecting	Factor: Water	2,5 .10-2	
environmental exposure	Emission or Release Factor: Soil	2,5 .10-2	
	initial release prior to RMM	Troot oir omississ to assistant	and rame as all
Technical conditions and	Air	Treat air emission to provide a typi efficiency of (%): (Efficiency: 0 %)	cai removai
measures at process level	Water	No wastewater treatment required.	
(source) to prevent release Technical onsite conditions and	Water	If discharging to domestic sewage t	•
measures to reduce or limit	Mator	no onsite wastewater treatment req	
discharges, air emissions and releases to soil	Water	Risk from environmental exposure freshwater.	is driven by the
Organizational measures to prevent/limit release from the site	estimates used.	ss sites thus conservative process	release
Conditions and measures related to sewage treatment plant	Type of Sewage Treatment Plant	Domestic sewage treatment plant	
	Flow rate of sewage treatment plant effluent	2.000 m3/d	
	Degradation efficiency	96,2 %	
	Percentage removed from waste water	96,2 %	
	Sludge Treatment	Do not apply industrial sludge to na should be incinerated, contained o	
Conditions and measures related to external treatment of waste for disposal	Waste treatment	External treatment and disposal of comply with applicable local and/or regulations.	

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Conditions and measures related to external recovery of waste	Recovery Methods External recovery and recycling of waste sho comply with applicable local and/or national regulations.				
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC6, PROC8a, PROC8b, PROC10, PROC11, PROC14					
	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).			
Product characteristics	Physical Form (at time of use)	liquid			
	Vapour pressure	0,5 - 10 kPa			
Frequency and duration of use	Frequency of use	8 hours/day			
Other operational conditions affecting workers exposure	Assumes use at not more t differently.	han 20 ℃ above ambient tem perature, unless stated			
Technical conditions and measures to control dispersion from source towards the worker	Bulk transfers (closed systems)	Transfer via enclosed lines.(PROC1)			
	Bulk transfers (closed systems)	Transfer via enclosed lines.(PROC2)			
	Bulk transfers (closed systems)	Transfer via enclosed lines.(PROC3)			
	Casting operations (open systems) Elevated temperature	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). or Avoid carrying out operation for more than 4 hours.(PROC6)			
	Spraying Machine	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). or Avoid carrying out operation for more than 4 hours.(PROC11)			
	Spraying Manual	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). or Avoid carrying out operation for more than 4 hours.(PROC11)			
	Storage	Store substance within a closed system.(PROC1,			
3. Exposure estimation and	reference to its source				

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	12 kg/day	

ESVOC spERC 8.10b.v1 has been used to evaluate the exposure for the environment.

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the **Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

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		Product: PAT®-527/2			
1. Short title of Exposure Sc					
Main User Groups	SU 3: Industrial uses: Use	es of substances as such or in preparations at industrial			
	sites				
Sectors of end-use	SU 10: Formulation				
	SU11: Manufacture of rub	ober products			
		ocess, no likelihood of exposure ontinuous process with occasional controlled exposure			
		atch process (synthesis or formulation)			
	PROC4: Use in batch and	d other process (synthesis) where opportunity for			
	exposure arises				
		ng in batch processes for formulation of preparations			
	and articles (multistage an PROC6: Calendering ope				
	PROC7: Industrial sprayir				
	PROC8a: Transfer of sub	stance or preparation (charging/discharging) from/to			
Process categories	vessels/large containers a				
	vessels/large containers a	stance or preparation (charging/discharging) from/to			
		tance or preparation into small containers (dedicated			
	filling line, including weigh	ing)			
	PROC13: Treatment of a	rticles by dipping and pouring			
	extrusion, pelletisation	reparations or articles by tabletting, compression,			
	PROC15: Use as laborate	pry reagent			
	PROC21: Low energy ma	nipulation of substances bound in materials and/or			
	articles				
Environmental Release	ERC1: Manufacture of su				
Categories	part of articles	rocessing aids in processes and products, not becoming			
		process regulators for polymerisation processes in			
	production of resins, rubbe				
2.1 Contributing scenario co	ntrolling environmenta	l exposure for: ERC1, ERC4, ERC6d			
	Maximum daily site	250 kg/day			
	tonnage (kg/day):				
	Regional use tonnage	5 ton(s)/year			
	(tons/year):				
Amount used	Fraction of EU tonnage	0,1			
	used in region: Fraction of regional	1			
	tonnage used locally:	·			
	Annual site tonnage	5 ton(s)/year			
	(tons/year):				
Frequency and duration of use	Continuous exposure	20 days/year			
	Dilution Factor (River)	10			
Environment factors not influenced by risk management	Dilution Factor (Coastal	100			
Third the state of	Areas)				
	Emission or Release Factor: Air	1,0 .10-2			
	Emission or Release				
Other given operational	Factor: Water	3,0 .10-5			
conditions affecting environmental exposure	Emission or Release	1,0 .10-4			
on morano na oxpoduro	Factor: Soil				
Technical conditions and	initial release prior to RMM Air	Treat air emission to provide a typical removal			
measures at process level	All	efficiency of (%): (Efficiency: 0 %)			
(source) to prevent release	Water	No wastewater treatment required.			
Technical onsite conditions and	Water	If discharging to domestic sewage treatment plant,			
measures to reduce or limit discharges, air emissions and		no onsite wastewater treatment required.			
releases to soil	Water	Prevent discharge of undissolved substance to or			
Organizational measures to		recover from onsite wastewater.			
prevent/limit release from the site	Sediment	Risk from environmental exposure is driven by			
		freshwater sediment.			
	Common practices vary across sites thus conservative process release				
	estimates used.	estimates used.			

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2.2 Contributing scenario cor	ntrolling worker exposu	re for: PROC1, PROC2, PROC3, PROC4,
Conditions and measures related to external recovery of waste	Recovery Methods	External recovery and recycling of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external treatment of waste for disposal		External treatment and disposal of waste should comply with applicable local and/or national regulations.
	Sludge Treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
to sewage treatment plant	Percentage removed from waste water	96,2 %
Conditions and measures related	Degradation efficiency	96,2 %
	Flow rate of sewage treatment plant effluent	2.000 m3/d
	Type of Sewage Treatment Plant	Domestic sewage treatment plant

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC13, PROC14, PROC15, PROC21

PROCS, PROCO, PROCI, PRO	OCoa, PROCOD, PROC9,	PROC13, PROC14, PROC13, PROC21		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently).		
	Physical Form (at time of use)	liquid		
	Vapour pressure	0,5 - 10 kPa		
Frequency and duration of use	Frequency of use	8 hours/day		
Other operational conditions affecting workers exposure	Assumes use at not more than 20 °C above ambient tem perature, unless stated differently.			
	Bulk weighing	Handle substance within a closed system.(PROC1)		
Technical conditions and measures to control dispersion from source towards the worker	Bulk weighing	Handle substance within a closed system.(PROC2)		
	Storage	Store substance within a closed system.(PROC1, PROC2)		

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Specific conditions	Compartment	Value	Level of Exposure	RCR
			Msafe	850000 kg/day	

ESVOC spERC 4.19a.v1 has been used to evaluate the exposure for the environment.

Workers

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for- industries-libraries.html). Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

Additional good practice advice beyond the REACH Chemical Safety Assessment