



Synfluid® PAO 4 cSt

Version 1.6

Revision Date 2011-01-27

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : Synfluid® PAO 4 cSt
 Material : 1079673, 1079928, 1079872, 1079835, 1079712, 1079702

EC-No.Registration number

Chemical Name	CAS-No. Index-No.	Registration number
1-Decene, homopolymer, hydrogenated	68037-01-4	01-2119486452-34-0000

Relevant Identified Uses Supported : Manufacture
 Distribution
 Use as an intermediate
 Formulation
 Use in coatings – industrial
 Use in coatings – professional
 Use in Coatings - Consumer
 Lubricants - Industrial
 Lubricants - Professional
 Lubricants - Consumer
 Metal working fluids / rolling oils - Industrial
 Metal working fluids / rolling oils – Professional
 Functional Fluids - Industrial
 Functional Fluids - Professional
 Functional Fluids - Consumer
 Use in polymer production – industrial
 Agrochemical uses
 Agrochemical uses
 Other consumer uses

Company : Chevron Phillips Chemical Company LP
 10001 Six Pines Drive
 The Woodlands, TX 77380

Local : Chevron Phillips Chemicals International N.V.
 Brusselsesteenweg 355
 B-3090 Overijse
 Belgium

MSDS Requests: (800) 852-5530
 Technical Information: (832) 813-4862
 Responsible Party: Product Safety Group
 Email:msds@cpchem.com

Emergency telephone:

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Health:

866.442.9628 (North America)

1.832.813.4984 (International)

Transport:

North America: CHEMTREC 800.424.9300 or 703.527.3887

Asia: +800 CHEMCALL (+800 2436 2255) China: 0532.8388.9090

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Chemcare Asia: Tel: +65 6848 9048 - Mob: +65 8382 9188 - Fax: +65 6848

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group

E-mail address : MSDS@CPChem.com

Website : www.CPChem.com

2. HAZARDS IDENTIFICATION**Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Aspiration hazard, Category 1

H304: May be fatal if swallowed and enters airways.

Classification (67/548/EEC, 1999/45/EC)

This substance is not classified as dangerous according to Directive 67/548/EEC.

Label elements**Labeling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H304

May be fatal if swallowed and enters airways.

Precautionary Statements : **Response:**
P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Do NOT induce vomiting.

P331

Storage:

P405

Store locked up.

Disposal:

P501

Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:

- 68037-01-4 1-Decene, homopolymer, hydrogenated

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Polyalphaolefin
PAO

Molecular formula : UVCB

Mixtures**Hazardous ingredients**

Chemical Name	CAS-No. EINECS-No.	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
1-Decene, homopolymer, hydrogenated	68037-01-4		Asp. Tox. 1; H304	100

EC-No.Registration number

Chemical Name	CAS-No. EINECS-No.	Registration number
1-Decene, homopolymer, hydrogenated	68037-01-4	01-2119486452-34-0000

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

- General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may only appear several hours later. Do not leave the victim unattended.
- If inhaled : Move to fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water. If on clothes, remove clothes. If skin irritation persists, call a physician.
- In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear. Do NOT induce vomiting. If symptoms persist, call a physician.

5. FIRE-FIGHTING MEASURES

- Flash point : 219 °C (426 °F)
Method: Cleveland Open Cup
- Autoignition temperature : 343 °C (649 °F)

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- | | | |
|--|---|--|
| Unsuitable extinguishing media | : | High volume water jet. |
| Special protective equipment for fire-fighters | : | Wear self contained breathing apparatus for fire fighting if necessary. |
| Further information | : | Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Fire and explosion protection | : | Normal measures for preventive fire protection. |
| Hazardous decomposition products | : | Carbon oxides. |

6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---------------------------|---|---|
| Personal precautions | : | Use personal protective equipment. Ensure adequate ventilation. |
| Environmental precautions | : | Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods for cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. |

7. HANDLING AND STORAGE**Handling**

- | | | |
|---|---|---|
| Advice on safe handling | : | Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. |
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection. |

Storage

- | | | |
|---|---|--|
| Requirements for storage areas and containers | : | Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. |
|---|---|--|

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment**

- | | | |
|-----------------|---|--|
| Hand protection | : | The suitability for a specific workplace should be discussed |
|-----------------|---|--|

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with the producers of the protective gloves.

- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

For additional details, see the Exposure Scenario in the Annex portion

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Appearance**

- Form : Liquid
- Physical state : Liquid
- Color : Clear, Colorless
- Odor : Odorless

Safety data

- Flash point : 219 °C (426 °F)
Method: Cleveland Open Cup
- Autoignition temperature : 343 °C (649 °F)
- Molecular formula : UVCB
- Boiling point/boiling range : 414 °C (777 °F)
- Vapor pressure : 1,70 MMHG
at 177 °C (351 °F)
- Viscosity, kinematic : 16 cSt
at 37,8 °C (100,0 °F)
- Evaporation rate : No data available

10. STABILITY AND REACTIVITY**Possibility of hazardous reactions**

- Conditions to avoid : No data available.
- Other data : No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION**Synfluid® PAO 4 cSt**

- Acute oral toxicity : LD50: > 5.000 mg/kg
Species: rat

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Acute inhalation toxicity : LC50: > 5,2 mg/l
 Exposure time: 4 HR
 Species: rat
 Sex: male and female

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Acute dermal toxicity : LD50: > 2.000 mg/kg
 Species: rat

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Skin irritation : No skin irritation

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Eye irritation : No eye irritation

Sensitization

1-Decene, homopolymer, hydrogenated : Classification: Did not cause sensitization on laboratory animals.

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Aspiration toxicity : May be fatal if swallowed and enters airways.
 Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

CMR effects

1-Decene, homopolymer, hydrogenated : Carcinogenicity: Not classifiable as a human carcinogen.
 Mutagenicity: Animal testing did not show any mutagenic effects.
 Teratogenicity: Did not show teratogenic effects in animal experiments.
 Reproductive toxicity: No toxicity to reproduction

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Further information : Solvents may degrease the skin.

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : LC50: > 1.000 mg/l
 Exposure time: 96 HR
 Species: Salmo gairdneri (Rainbow trout)
 LC50: > 750 mg/l
 Exposure time: 96 HR
 Species: Pimephales promelas (fathead minnow)

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Toxicity to daphnia and other aquatic invertebrates. : EC50: 190 mg/l
Exposure time: 48 HR
Species: Daphnia magna (Water flea)

Toxicity to algae

1-Decene, homopolymer, hydrogenated : NOELR: 1.000 mg/l
Exposure time: 72 HR
Species: Scenedesmus capricornutum (fresh water algae)
static test Method: OECD Test Guideline 201

Bioaccumulation

1-Decene, homopolymer, hydrogenated : This material is not expected to bioaccumulate.

Biodegradability

1-Decene, homopolymer, hydrogenated : Expected to be inherently biodegradable.

Further information on ecology**Results of PBT assessment**

1-Decene, homopolymer, hydrogenated : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : No data available

13. DISPOSAL CONSIDERATIONS

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

For additional details, see the Exposure Scenario in the Annex portion

14. TRANSPORT INFORMATION

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names,

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etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

USDOT

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

15. REGULATORY INFORMATION**National legislation****Chemical Safety Assessment**

Ingredients : Dec-1-ene, oligomers, hydrogenated A Chemical Safety Assessment has been carried out for this substance.

Major Accident Hazard Legislation : 96/82/EC Update: 2003
Directive 96/82/EC does not apply

Water contaminating class (Germany) : WGK 1 slightly water endangering
Description of the classification procedure for all materials, which are not named in the appendices 1 and 2, on the basis of R-sentence-classifications of the European dangerous materials
ZDE_WGK Update: 2005-08-31

Notification status

Europe REACH : On the inventory, or in compliance with the inventory
United States of America US.TSCA : On the inventory, or in compliance with the inventory
Canada DSL : On the inventory, or in compliance with the inventory
Australia AICS : On the inventory, or in compliance with the inventory
New Zealand NZIoC : On the inventory, or in compliance with the inventory

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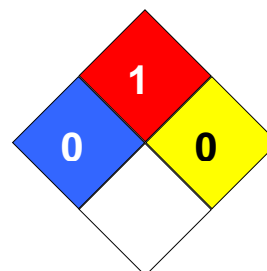
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Notification number: HSR002606

Japan ENCS : On the inventory, or in compliance with the inventory
 Korea KECI : On the inventory, or in compliance with the inventory
 Philippines PICCS : On the inventory, or in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

NFPA Classification : Health Hazard: 0
 Fire Hazard: 1
 Reactivity Hazard: 0

**Further information**

Legacy MSDS Number : 3332

NSF H1, HX-1 Registered, meets USDA 1998 H1 Guidelines

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this MSDS pertains only to the product as shipped.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LOAEL	Lowest Observed Adverse Effect Level
AICS	Australia, Inventory of Chemical Substances	NFPA	National Fire Protection Agency
DSL	Canada, Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
NDSL	Canada, Non-Domestic Substances List	NTP	National Toxicology Program
CNS	Central Nervous System	NZIoC	New Zealand Inventory of Chemicals
CAS	Chemical Abstract Service	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration	NOEC	No Observed Effect Concentration
EC50	Effective Concentration 50%	OSHA	Occupational Safety & Health Administration
EINECS	European Inventory of Existing Chemical Substances	PEL	Permissible Exposure Limit
MAK	Germany Maximum Concentration Values	PICCS	Philippines Inventory of Commercial Chemical Substances
GHS	Globally Harmonized System	PRNT	Presumed Not Toxic
>=	Greater Than or Equal To	RCRA	Resource Conservation Recovery Act
IC50	Inhibition Concentration 50%	STEL	Short-term Exposure Limit
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act.
IECSC	Inventory of Existing Chemical	TLV	Threshold Limit Value

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	Substances in China		
ENCS	Japan, Inventory of Existing and New Chemical Substances	TWA	Time Weighted Average
KECI	Korea, Existing Chemical Inventory	TSCA	Toxic Substance Control Act
<=	Less Than or Equal To	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
LC50	Lethal Concentration 50%	WHMIS	Workplace Hazardous Materials Information System
LD50	Lethal Dose 50%		

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Annex**1. Short title of Exposure Scenario: Manufacture**

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU3, SU8, SU9: Industrial Manufacturing (all), Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals
Process category	:	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 : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities PROC15: Use as laboratory reagent
Environmental release category	:	ERC1, ERC4: Manufacture of substances, Industrial use of processing aids in processes and products, not becoming part of articles
Further information	:	Manufacture of the substance or use as a process chemical or extraction agent. Includes recycling/ recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities

ERC1, ERC4:**Manufacture of substances, Industrial use of processing aids in processes and products, not becoming part of articles****Technical conditions and measures / Organizational measures**

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8b, PROC15: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Use as laboratory reagent

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Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Distribution

Main User Groups : **SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites

Sector of use : **SU3:** Industrial Manufacturing (all)

Process category : **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
: **PROC8b:** Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities
: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC15: Use as laboratory reagent

Environmental release category : **ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7:** Manufacture of substances, Formulation of preparations, Formulation in materials, Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use resulting in inclusion into or onto a matrix, Industrial use resulting in manufacture of another substance (use of intermediates), Industrial use of reactive processing aids, Industrial use of monomers for manufacture of thermoplastics, Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers, Industrial use of substances in closed systems

Further information : Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

ERC1, ERC2, ERC3,

ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7: Manufacture of substances,

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Formulation of preparations, Formulation in materials, Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use resulting in inclusion into or onto a matrix, Industrial use resulting in manufacture of another substance (use of intermediates), Industrial use of reactive processing aids, Industrial use of monomers for manufacture of thermoplastics, Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers, Industrial use of substances in closed systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8b,, PROC15: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Use as laboratory reagent

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Use as an intermediate

Main User Groups : **SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites

Sector of use : **SU3, SU8, SU9:** Industrial Manufacturing (all), Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals

Process category : **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

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formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises: **PROC8b:** Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**PROC8b:** Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities**PROC15:** Use as laboratory reagentEnvironmental release category : **ERC6a:** Industrial use resulting in manufacture of another substance (use of intermediates)

Further information : Use as an isolated intermediate under strictly controlled conditions

ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)**Technical conditions and measures / Organizational measures**

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8b, PROC15: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Use as laboratory reagent

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: **Formulation**

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Main User Groups	: SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	: SU3, SU 10: Industrial Manufacturing (all), Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	: 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 : PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities : Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting; PROC15: Use as laboratory reagent
Environmental release category	: ERC2: Formulation of preparations
Further information	: Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

preparations**ERC2: Formulation of****Technical conditions and measures / Organizational measures**

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,,, PROC8b,, PROC14, PROC15: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact), PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer

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of substance or preparation into small containers (dedicated filling line, including weighing), Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting; Use as laboratory reagent

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Use in coatings – industrial

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU3: Industrial Manufacturing (all)
Process category	:	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 PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC7: Industrial spraying PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities : 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 mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting; PROC15: Use as laboratory reagent
Environmental release category	:	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Further information	:	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment

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cleaning, maintenance and associated laboratory activities.

ERC4: Industrial use

of processing aids in processes and products, not becoming part of articles
Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC7,, PROC8b,, PROC10, PROC13, PROC14, PROC15: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact), Industrial spraying, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Roller application or brushing, Treatment of articles by dipping and pouring, Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting;, Use as laboratory reagent

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Use in coatings – professional

Main User Groups : **SU 22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Sector of use : **SU22:** Public domain (administration, education, entertainment, services, craftsmen)

Process category : **PROC1:** Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional

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controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)**PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises: **PROC 5:** Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact): **PROC8b:** Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at 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 category : **ERC8a, ERC8d:** Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,,, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact), PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Roller application or brushing, Non industrial spraying, Treatment of articles by dipping and pouring, Use as laboratory reagent, Hand-mixing with intimate contact and only PPE available

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Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Use in Coatings - Consumer

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)

Sector of use : **SU 21:** Consumer uses: Private households (= general public = consumers)

Product category : **PC1:** Adhesives, sealants
PC4: Anti-Freeze and de-icing products
PC8: Biocidal products (e.g. Disinfectants, pest control)
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; including bleaches and other processing aids

Environmental release category : **ERC8a, ERC8d:** Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Further information : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Technical conditions and measures / Organizational measures

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Remarks : Not applicable

2.2 Contributing scenario controlling consumer exposure for: PC1, PC4, PC8, PC9a, PC9b, PC9c, PC15, PC18, PC23, PC24, PC31, PC34: Adhesives, sealants, Anti-Freeze and de-icing products, Biocidal products (e.g. Disinfectants, pest control), Coatings and paints, thinners, paint removers, Fillers, putties, plasters, modelling clay, Finger paints, Non-metal-surface treatment products, Ink and toners, Leather tanning, dye, finishing, impregnation and care products, Lubricants, greases, release products, Polishes and wax blends, Textile dyes, finishing and impregnating products; including bleaches and other processing aids

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Lubricants - Industrial

Main User Groups : **SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites

Sector of use : **SU3:** Industrial Manufacturing (all)

Process category : **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
PROC7: Industrial spraying
: **PROC8b:** Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities
: 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

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PROC17: Lubrication at high energy conditions and in partly open process
PROC18: Greasing at high energy conditions

Environmental release category : **ERC4, ERC7:** Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use of substances in closed systems

Further information : Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.

ERC4, ERC7:

Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use of substances in closed systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC7,, PROC8b,, PROC10, PROC13, PROC17, PROC18: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, Industrial spraying, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Roller application or brushing, Treatment of articles by dipping and pouring, Lubrication at high energy conditions and in partly open process, Greasing at high energy conditions

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

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1. Short title of Exposure Scenario: Lubricants - Professional

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: 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 : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities : 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 closed systems
Environmental release category	: ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
Further information	: Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.

ERC8a, ERC8d,

ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8b,, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20: Use in

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closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Roller application or brushing, Non industrial spraying, Treatment of articles by dipping and pouring, Lubrication at high energy conditions and in partly open process, Greasing at high energy conditions, Heat and pressure transfer fluids in dispersive, professional use but closed systems

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Lubricants - Consumer

Main User Groups	:	SU 21: Consumer uses: Private households (= general public = consumers)
Sector of use	:	SU 21: Consumer uses: Private households (= general public = consumers)
Product category	:	PC1: Adhesives, sealants PC24: Lubricants, greases, release products PC31: Polishes and wax blends
Environmental release category	:	ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
Further information	:	Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

ERC8a, ERC8d,

ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

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Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling consumer exposure for: PC1, PC24, PC31: Adhesives, sealants, Lubricants, greases, release products, Polishes and wax blends**Amount used**

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Metal working fluids / rolling oils - Industrial

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU3: Industrial Manufacturing (all)
Process category	:	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 : PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC7: Industrial spraying : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities : Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

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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 category : **ERC4:** Industrial use of processing aids in processes and products, not becoming part of articles

Further information : Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

ERC4: Industrial use

of processing aids in processes and products, not becoming part of articles

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC7,, PROC8b,, PROC10, PROC13, PROC17: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact), Industrial spraying, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Roller application or brushing, Treatment of articles by dipping and pouring, Lubrication at high energy conditions and in partly open process

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

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Not applicable

1. Short title of Exposure Scenario: **Metal working fluids / rolling oils – Professional**

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: 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) : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities : 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
Environmental release category	: ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
Further information	: Covers the use in formulated MWFs including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles, and disposal of waste oils.

ERC8a, ERC8d,

ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems, Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3,, PROC8b,, PROC10, PROC11, PROC13, PROC17: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use

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in closed batch process (synthesis or formulation), PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), Roller application or brushing, Non industrial spraying, Treatment of articles by dipping and pouring, Lubrication at high energy conditions and in partly open process

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Functional Fluids - Industrial

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU3: Industrial Manufacturing (all)
Process category	:	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 : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities : Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Environmental release category	:	ERC7: Industrial use of substances in closed systems
Further information	:	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.

ERC7: Industrial use**of substances in closed systems**

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Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8b,: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Functional Fluids - Professional

Main User Groups	:	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	:	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	:	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) : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities : Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Environmental release category	:	ERC9a, ERC9b: Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
Further information	:	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional

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equipment including maintenance and related material transfers.

ERC9a, ERC9b: Wide

dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3,,:
Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Functional Fluids - Consumer

Main User Groups	:	SU 21: Consumer uses: Private households (= general public = consumers)
Sector of use	:	SU 21: Consumer uses: Private households (= general public = consumers)
Product category	:	PC16: Heat transfer fluids PC17: Hydraulic fluids
Environmental release category	:	ERC9a, ERC9b: Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
Further information	:	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.

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ERC9a, ERC9b: Wide

dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling consumer exposure for: PC16, PC17: Heat transfer fluids, Hydraulic fluids**Amount used**

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Use in polymer production – industrial

Main User Groups	:	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU3, SU 10: Industrial Manufacturing (all), Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	:	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 : PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC6: Calendering operations : PROC8b: Transfer of substance or preparation

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(charging/discharging) from/to vessels/large containers at dedicated facilities
PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities
PROC15: Use as laboratory reagent
PROC14: Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting;

Environmental release category : **ERC4, ERC6c:** Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use of monomers for manufacture of thermoplastics

Further information : Manufacture of polymers from monomers in continuous and batch processes, include sparging, discharging, and reactor maintenance and immediate polymer product formation (i.e. compounding, pelletisation, product off-gassing).

ERC4, ERC6c:**Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use of monomers for manufacture of thermoplastics****Technical conditions and measures / Organizational measures**

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC6,, PROC8b, PROC15, PROC14: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in closed batch process (synthesis or formulation), Use in batch and other process (synthesis) where opportunity for exposure arises, PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact), Calendering operations, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Use as laboratory reagent, Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting;

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Agrochemical uses

Main User Groups	:	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	:	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	:	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises : PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring
Environmental release category	:	ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Further information	:	Covers the use as binders and release agents including material transfers, mixing, application by spraying, brushing, and handling of waste.

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC4,, PROC8b, PROC11, PROC13: Use in closed process, no likelihood of exposure, Use in closed, continuous process with occasional controlled exposure, Use in batch and other process (synthesis) where opportunity for exposure arises, PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Non industrial spraying, Treatment of articles by dipping and pouring

Amount used

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Remarks : Not applicable

3. Exposure estimation and reference to its source

Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Agrochemical uses

Main User Groups : **SU 21:** Consumer uses: Private households (= general public = consumers)

Sector of use : **SU 21:** Consumer uses: Private households (= general public = consumers)

Product category : **PC12:** Fertilizers
PC27: Plant protection products

Environmental release category : **ERC8d:** Wide dispersive outdoor use of processing aids in open systems

Further information : Covers the consumer use in agrochemicals in liquid and solid forms.

ERC8d: Wide**dispersive outdoor use of processing aids in open systems****Technical conditions and measures / Organizational measures**

Remarks : Not applicable

2.2 Contributing scenario controlling consumer exposure for: PC12, PC27: Fertilizers, Plant protection products**Amount used**

Remarks : Not applicable

3. Exposure estimation and reference to its source

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Remarks: Not applicable

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

Not applicable

1. Short title of Exposure Scenario: Other consumer uses

Main User Groups	: SU 21: Consumer uses: Private households (= general public = consumers)
Sector of use	: SU 21: Consumer uses: Private households (= general public = consumers)
Product category	: PC31: Polishes and wax blends
Environmental release category	: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Further information	: Consumer uses e.g. as a carrier in cosmetics/personal care products, perfumes and fragrances. Note: For cosmetic and personal care products, risk assessment only required for the environment under REACH as human health is covered by alternative legislation.

ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Technical conditions and measures / Organizational measures

Remarks : Not applicable

2.2 Contributing scenario controlling consumer exposure for: PC31: Polishes and wax blends**Amount used**

Remarks : Not applicable

3. Exposure estimation and reference to its source

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Remarks: Not applicable

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

Not applicable