

**AlphaPlus® 1-Tetradecene**

Version 2.5

Revision Date 2017-04-13

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product information**

Product Name : AlphaPlus® 1-Tetradecene  
Material : 1064098, 1037032, 1037031

**EC-No.Registration number**

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
1-Tetradecene	1120-36-1 214-306-9	Chevron Phillips Chemical Company LP 01-2119472424-39-0003

Relevant Identified Uses : Manufacture  
Supported Distribution  
Use as an intermediate  
Formulation  
Use in coatings – industrial  
Use in coatings – professional  
Use in Coatings - Consumer  
Use as a cleaning agent – industrial  
Use as a cleaning agent – professional  
Use as a cleaning agent – consumer  
Use in Oil and Gas field drilling and production operations -  
Industrial  
Use in Oil and Gas field drilling and production operations –  
Professional  
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 mining – industrial  
Use in polymer production – industrial

**Company** : Chevron Phillips Chemical Company LP  
Normal Alpha Olefins (NAO)  
10001 Six Pines Drive  
The Woodlands, TX 77380

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Local : Chevron Phillips Chemicals International N.V.  
 Airport Plaza (Stockholm Building)  
 Leonardo Da Vincilaan 19  
 1831 Diegem  
 Belgium

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

**Emergency telephone:****Health:**

866.442.9628 (North America)  
 1.832.813.4984 (International)

**Transport:**

CHEMTREC 800.424.9300 or 703.527.3887(int'l)  
 Asia: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316  
 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Mexico CHEMTREC 01-800-681-9531 (24 hours)  
 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 : SDS@CPChem.com  
 Website : www.CPChem.com

**SECTION 2: Hazards identification**
**Classification of the substance or mixture**  
**REGULATION (EC) No 1272/2008**

Aspiration hazard, Category 1

H304:  
 May be fatal if swallowed and enters airways.

**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/doctor.  
 Do NOT induce vomiting.  
**P331**  
**Storage:**  
 P405 Store locked up.  
**Disposal:**  
 P501 Dispose of contents/ container to an

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approved waste disposal plant.

Hazardous ingredients which must be listed on the label:

- 1120-36-1 1-Tetradecene

**Additional Labeling:**

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH066

Repeated exposure may cause skin dryness or cracking.

**SECTION 3: Composition/information on ingredients**

Synonyms : Tetradec-1-ene (C<sub>14</sub>H<sub>28</sub>)  
 1-Tetradecene (C<sub>14</sub>H<sub>28</sub>)  
 NAO 14 (C<sub>14</sub>H<sub>28</sub>)

Molecular formula : C<sub>14</sub>H<sub>28</sub>

**Mixtures****Hazardous ingredients**

Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
<b>1-Tetradecene</b>	<b>1120-36-1</b> <b>214-306-9</b>	Asp. Tox. 1; H304	94
2-Butyl-1-Decene	51655-65-3	Asp. Tox. 1; H304	2
2-Ethyl-1-Dodecene	19780-34-8	Asp. Tox. 1; H304	2
2-Hexyl-1-Octene	19780-80-4	Asp. Tox. 1; H304	1
Related Materials			1

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

**SECTION 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 appear several hours later. Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of eye contact : Flush eyes with water as a precaution. Remove contact

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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. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

**SECTION 5: Firefighting measures**

Flash point : 107 °C (225 °F)

Autoignition temperature : 235 °C (455 °F)

Unsuitable extinguishing media : High volume water jet.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting 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 : No data available.

**SECTION 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.

**SECTION 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.

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**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.

**SECTION 8: Exposure controls/personal protection**

PNEC : Fresh water  
Value: 0,001 mg/l

PNEC : Sea water  
Value: 0,001 mg/l

PNEC : Fresh water sediment  
Value: 67,62 mg/kg

PNEC : Sea sediment  
Value: 67,62 mg/kg

PNEC : Soil  
Value: 13,5 mg/kg

**Engineering measures**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Personal protective equipment**

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection in relation to its type, to the

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concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Protective suit. Safety shoes.

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

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****Appearance**

Form : Liquid  
Physical state : Liquid  
Color : Colorless

**Safety data**

Flash point : 107 °C (225 °F)

Lower explosion limit : > 0,5 %(V)

Upper explosion limit : < 5,4 %(V)

Oxidizing properties : no

Autoignition temperature : 235 °C (455 °F)

Molecular formula : C<sub>14</sub>H<sub>28</sub>

Molecular weight : 196,42 g/mol

pH : Not applicable

Pour point : No data available

Melting point/range : -13,9 °C (7,0 °F)

Boiling point/boiling range : 251 °C (484 °F)

Vapor pressure : 0,01 MMHG  
at 25 °C (77 °F)  
  
< 0,10 kPa  
at 65 °C (149 °F)

Relative density : 0,77  
at 15,6 °C (60,1 °F)

Density : 775 kg/m<sup>3</sup>  
at 15 °C (59 °F)  
  
774 kg/m<sup>3</sup>  
at 25 °C (77 °F)

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	750 kg/m <sup>3</sup> at 50 °C (122 °F)
Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 2,61 cSt at 20 °C (68 °F)
Relative vapor density	: 6,8 (Air = 1.0)
Evaporation rate	: No data available

**SECTION 10: Stability and reactivity**

Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
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**Possibility of hazardous reactions**

Conditions to avoid	: No data available.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous decomposition products	: No data available
Other data	: No decomposition if stored and applied as directed.

**SECTION 11: Toxicological information****AlphaPlus® 1-Tetradecene**

<b>Acute oral toxicity</b>	: LD50: > 5.000 mg/kg Species: Rat Sex: male and female Information given is based on data obtained from similar substances.
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**AlphaPlus® 1-Tetradecene**

<b>Acute inhalation toxicity</b>	: LC50: > 5 mg/l Exposure time: 4 h Species: Rat Test atmosphere: dust/mist Method: Acute toxicity estimate Information given is based on data obtained from similar substances. Not classified due to data which are conclusive although insufficient for classification.
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**AlphaPlus® 1-Tetradecene****Acute dermal toxicity**

: LD50 Dermal: > 2.020 mg/kg  
 Species: Rabbit  
 Sex: male and female  
 Information given is based on data obtained from similar substances.

**AlphaPlus® 1-Tetradecene****Skin irritation**

: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

**AlphaPlus® 1-Tetradecene****Eye irritation**

: No eye irritation  
 Information given is based on data obtained from similar substances.

**AlphaPlus® 1-Tetradecene****Sensitization**

: Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances.

**Reproductive toxicity****1-Tetradecene**

: Species: Rat  
 Sex: male  
 Application Route: Oral diet  
 Dose: 0, 100, 500, 1000 mg/kg  
 Exposure time: 43-47 days  
 Method: OECD Guideline 422  
 NOAEL Parent: 1.000 mg/kg  
 NOAEL F1: 1.000 mg/kg

Species: Rat  
 Sex: female  
 Application Route: Oral diet  
 Dose: 0, 100, 500, 1000 mg/kg  
 Exposure time: 46-47 days  
 Method: OECD Guideline 422  
 NOAEL Parent: 1.000 mg/kg  
 NOAEL F1: 1.000 mg/kg

**AlphaPlus® 1-Tetradecene****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-Tetradecene**

: Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
 Reproductive toxicity: No toxicity to reproduction

**AlphaPlus® 1-Tetradecene****Further information**

: Solvents may degrease the skin.



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**SECTION 12: Ecological information****Toxicity to fish**

1-Tetradecene : LL50: > 1.000 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
semi-static test Test substance: yes  
Method: OECD Test Guideline 203  
The product has low solubility in the test medium. An aqueous dispersion was tested.

**Toxicity to daphnia and other aquatic invertebrates**

1-Tetradecene : EL50: > 1.000 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Test substance: yes  
Method: OECD Test Guideline 202  
The product has low solubility in the test medium. An aqueous dispersion was tested.

**Toxicity to algae**

1-Tetradecene : EL50: > 1.000 mg/l  
Exposure time: 96 h  
Species: Selenastrum capricornutum (algae)  
static test Test substance: yes  
Method: OECD Test Guideline 201  
The product has low solubility in the test medium. An aqueous dispersion was tested.

**Elimination information (persistence and degradability)**

Biodegradability : According to the results of tests of biodegradability this product is considered as being readily biodegradable.

**Ecotoxicology Assessment****Results of PBT assessment**

1-Tetradecene : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : No data available

**SECTION 13: Disposal considerations**

The information in this SDS 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.

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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

**SECTION 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, 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 SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**

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

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

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

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

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

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**

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

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**

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

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

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**SECTION 15: Regulatory information****National legislation****Chemical Safety Assessment**

**Ingredients** : tetradec-1-ene A Chemical Safety Assessment 214-306-9 has been carried out for this substance.

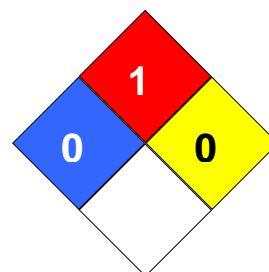
**Major Accident Hazard Legislation** : 96/82/EC Update: 2003  
Directive 96/82/EC does not apply

**Notification status**

Europe REACH : On the inventory, or in compliance with the inventory  
 United States of America (USA) : On the inventory, or in compliance with the inventory  
 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  
 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

**SECTION 16: Other information**

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

**Further information**

Legacy SDS Number : PE0020

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

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	American Conference of	LD50	Lethal Dose 50%
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	Government Industrial Hygienists		
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

**Full text of H-Statements referred to under sections 2 and 3.**

H304

May be fatal if swallowed and enters airways.

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

Main User Groups	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3, SU8, SU9:</b> Industrial Manufacturing (all), Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC15:</b> Use as laboratory reagent
Environmental release category	:	<b>ERC1, ERC4:</b> 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

**2.1 Contributing scenario controlling environmental exposure for: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, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities,**

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**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: Distribution**

Main User Groups	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3:</b> Industrial Manufacturing (all)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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) <b>PROC15:</b> Use as laboratory reagent
Environmental release category	:	<b>ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7:</b> 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

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distribution and associated laboratory activities.

**2.1 Contributing scenario controlling environmental exposure for: 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**

**Technical conditions and measures / Organizational measures**

Remarks : Not applicable

**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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),

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Process category	: Manufacture of fine chemicals <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC15:</b> Use as laboratory reagent
Environmental release category	: <b>ERC6a:</b> Industrial use resulting in manufacture of another substance (use of intermediates)
Further information	: Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

**2.1 Contributing scenario controlling environmental exposure for: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, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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**



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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: Formulation**

Main User Groups	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3, SU 10:</b> Industrial Manufacturing (all), Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC5:</b> Mixing or blending in batch processes for formulation of mixtures and articles (multistage and/or significant contact) Industrial setting; <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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) <b>PROC14:</b> Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting; <b>PROC15:</b> Use as laboratory reagent
Environmental release category	:	<b>ERC2:</b> 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.

**2.1 Contributing scenario controlling environmental exposure for:ERC2: Formulation of preparations****Technical conditions and measures / Organizational measures**

Remarks : Not applicable

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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8a, 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), Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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), 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	: <b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	: <b>SU3:</b> Industrial Manufacturing (all)
Process category	: <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> 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) <b>PROC7:</b> Industrial spraying <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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) <b>PROC10:</b> Roller application or brushing

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**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 cleaning, maintenance and associated laboratory activities.

## 2.1 Contributing scenario controlling environmental exposure for: **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, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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

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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: Use in coatings – professional**

Main User Groups	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> 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) <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC10:</b> Roller application or brushing <b>PROC11:</b> Non industrial spraying <b>PROC13:</b> Treatment of articles by dipping and pouring <b>PROC15:</b> Use as laboratory reagent <b>PROC19:</b> Hand-mixing with intimate contact and only PPE available
Environmental release category	: <b>ERC8a, ERC8d:</b> 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, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

**2.1 Contributing scenario controlling environmental exposure for: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

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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC8a, 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), Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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**

**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	: <b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sector of use	: <b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Product category	: <b>PC1:</b> Adhesives, sealants <b>PC4:</b> Anti-Freeze and de-icing products <b>PC8:</b> Biocidal products (e.g. Disinfectants, pest control) <b>PC9a:</b> Coatings and paints, thinners, paint removers <b>PC9b:</b> Fillers, putties, plasters, modelling clay <b>PC9c:</b> Finger paints <b>PC15:</b> Non-metal-surface treatment products <b>PC18:</b> Ink and toners <b>PC23:</b> Leather tanning, dye, finishing, impregnation and care products <b>PC24:</b> Lubricants, greases, release products <b>PC31:</b> Polishes and wax blends <b>PC34:</b> Textile dyes, finishing and impregnating products; including bleaches and other processing aids
Environmental release category	: <b>ERC8a, ERC8d:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

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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.

**2.1 Contributing scenario controlling environmental exposure for: 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: 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: **Use as a cleaning agent – industrial**

Main User Groups

:

**SU 3:** Industrial uses: Uses of substances as such or in

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Sector of use	: preparations at industrial sites
Process category	: <b>SU3:</b> Industrial Manufacturing (all) <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC7:</b> Industrial spraying <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC10:</b> Roller application or brushing <b>PROC13:</b> Treatment of articles by dipping and pouring
Environmental release category	: <b>ERC4:</b> Industrial use of processing aids in processes and products, not becoming part of articles
Further information	: Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.

**2.1 Contributing scenario controlling environmental exposure for: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: PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13: 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Roller application or brushing, Treatment of articles by dipping and pouring****Amount used**

Remarks : Not applicable

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**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 a cleaning agent – professional**

Main User Groups	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC10:</b> Roller application or brushing <b>PROC11:</b> Non industrial spraying <b>PROC13:</b> Treatment of articles by dipping and pouring
Environmental release category	: <b>ERC8a, ERC8d:</b> 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 a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

**2.1 Contributing scenario controlling environmental exposure for: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



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**2.2 Contributing scenario controlling worker exposure for: PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13: 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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**

**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 a cleaning agent – consumer**

Main User Groups	:	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sector of use	:	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Product category	:	<b>PC3:</b> Air care products <b>PC4:</b> Anti-Freeze and de-icing products <b>PC8:</b> Biocidal products (e.g. Disinfectants, pest control) <b>PC9a:</b> Coatings and paints, thinners, paint removers <b>PC9b:</b> Fillers, putties, plasters, modelling clay <b>PC9c:</b> Finger paints <b>PC24:</b> Lubricants, greases, release products <b>PC35:</b> Washing and cleaning products (including solvent based products) <b>PC38:</b> Welding and soldering products (with flux coatings or flux cores.), flux products
Environmental release category	:	<b>ERC8a, ERC8d:</b> Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Further information	:	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.

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**2.1 Contributing scenario controlling environmental exposure for: 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: PC3, PC4, PC8, PC9a, PC9b, PC9c, PC24, PC35, PC38: Air care products, 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, Lubricants, greases, release products, Washing and cleaning products (including solvent based products), Welding and soldering products (with flux coatings or flux cores.), flux products**

**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 Oil and Gas field drilling and production operations - Industrial**

Main User Groups	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3:</b> Industrial Manufacturing (all)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where

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

Further information : Oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.

**2.1 Contributing scenario controlling environmental exposure for: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, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities****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: Use in Oil and Gas field drilling and production operations – Professional**

Main User Groups	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities
Environmental release category	: <b>ERC8d:</b> Wide dispersive outdoor use of processing aids in open systems
Further information	: Oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.

**2.1 Contributing scenario controlling environmental exposure for: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 worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities**

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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: Lubricants - Industrial**

Main User Groups	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3:</b> Industrial Manufacturing (all)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC7:</b> Industrial spraying <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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) <b>PROC10:</b> Roller application or brushing <b>PROC13:</b> Treatment of articles by dipping and pouring <b>PROC17:</b> Lubrication at high energy conditions and in partly open process <b>PROC18:</b> Greasing at high energy conditions
Environmental release category	:	<b>ERC4, ERC7:</b> 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 engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.

**2.1 Contributing scenario controlling environmental exposure for:ERC4, ERC7: Industrial use of processing aids in processes and products, not becoming part of articles,**

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**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, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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

**1. Short title of Exposure Scenario: Lubricants - Professional**

Main User Groups	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at

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non-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.

**2.1 Contributing scenario controlling environmental exposure for: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, PROC8a, PROC8b,, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20:** 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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

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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: Lubricants - Consumer**

Main User Groups	:	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sector of use	:	<b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Product category	:	<b>PC1:</b> Adhesives, sealants <b>PC24:</b> Lubricants, greases, release products <b>PC31:</b> Polishes and wax blends
Environmental release category	:	<b>ERC8a, ERC8d, ERC9a, ERC9b:</b> 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.

**2.1 Contributing scenario controlling environmental exposure for: 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



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**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	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3:</b> Industrial Manufacturing (all)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> 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) <b>PROC7:</b> Industrial spraying <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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) <b>PROC10:</b> Roller application or brushing <b>PROC13:</b> Treatment of articles by dipping and pouring <b>PROC17:</b> Lubrication at high energy conditions and in partly open process
Environmental release category	:	<b>ERC4:</b> Industrial use of processing aids in processes and products, not becoming part of articles
Further information	:	

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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.

**2.1 Contributing scenario controlling environmental exposure for: 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, PROC5, PROC7, PROC8a, 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, Mixing or blending in batch processes for formulation of mixtures and articles (multistage and/or significant contact) Industrial setting;, Industrial spraying, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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**

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)

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Sector of use	: <b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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) <b>PROC10:</b> Roller application or brushing <b>PROC11:</b> Non industrial spraying <b>PROC13:</b> Treatment of articles by dipping and pouring <b>PROC17:</b> Lubrication at high energy conditions and in partly open process
Environmental release category	: <b>ERC8a, ERC8d, ERC9a, ERC9b:</b> 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.

**2.1 Contributing scenario controlling environmental exposure for: 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, PROC8a, PROC8b,, PROC10, PROC11, 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), Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Transfer of substance or preparation into small**

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**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	:	<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<b>SU3:</b> Industrial Manufacturing (all)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> 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	:	<b>ERC7:</b> 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.

**2.1 Contributing scenario controlling environmental exposure for: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, PROC8a, 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, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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	:	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sector of use	:	<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	:	<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities : Transfer of substance or preparation into small containers (dedicated filling line, including weighing) <b>PROC20:</b> Heat and pressure transfer fluids in dispersive, professional use but closed systems
Environmental release category	:	<b>ERC9a, ERC9b:</b> Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems
Further information	:	

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Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional equipment including maintenance and related material transfers.

## 2.1 Contributing scenario controlling environmental exposure for: 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, PROC8a,, PROC20: 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), Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation into small containers (dedicated filling line, including weighing), 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: **Functional Fluids - Consumer**

Main User Groups	: <b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Sector of use	: <b>SU 21:</b> Consumer uses: Private households (= general public = consumers)
Product category	: <b>PC16:</b> Heat transfer fluids <b>PC17:</b> Hydraulic fluids
Environmental release category	: <b>ERC9a, ERC9b:</b> Wide dispersive indoor use of substances in closed systems, Wide dispersive outdoor use of substances in closed systems

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Further information : Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.

**2.1 Contributing scenario controlling environmental exposure for: 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 mining – 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

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: PROC 5: 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

: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

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

Further information :  
Covers the use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities, and substance recovery and disposal.

## 2.1 Contributing scenario controlling environmental exposure for: **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,, PROC8a, 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, PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact), Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-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



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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: Use in polymer production – industrial**

Main User Groups	: <b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	: <b>SU3, SU 10:</b> Industrial Manufacturing (all), Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	: <b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> 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) <b>PROC6:</b> Calendering operations <b>PROC8a:</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC14:</b> Production of mixtures or articles by tableting, compression, extrusion, pelletization; Industrial setting; <b>PROC15:</b> Use as laboratory reagent
Environmental release category	: <b>ERC4, ERC6c:</b> 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).

**2.1 Contributing scenario controlling environmental exposure for: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

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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4,, PROC6, PROC8a, 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), Calendering operations, Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities, Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, Production of mixtures or articles by tabletting, 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