



Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

Product information

Trade name : Synfluid® PAO 6 cSt
 Material : 1079874, 1079931, 1079667

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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:**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)**

Not a dangerous substance according to Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC. Label elements

Labeling (REGULATION (EC) No 1272/2008)

Not a dangerous substance according to Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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%]
Contains no hazardous ingredients according to GHS. :				

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

1-Decene Homopolymer Hydrogenated	68037-01-4			100
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EC-No.Registration number

Chemical Name	CAS-No. EINECS-No.	Registration number
1-Decene Homopolymer Hydrogenated	68037-01-4	01-2119486452-34-0000

4. FIRST AID MEASURES

- General advice : 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 skin contact : Wash off with soap and water.
- In case of eye contact : Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

5. FIRE-FIGHTING MEASURES

- Flash point : 238 °C (460 °F)
Method: Cleveland Open Cup
- Autoignition temperature : 354 °C (669 °F)
- 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

- Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

7. HANDLING AND STORAGE**Handling**

Advice on safe handling : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.

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

Respiratory protection : No personal respiratory protective equipment normally required.

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

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : 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**

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

Safety data

Flash point : 238 °C (460 °F)
Method: Cleveland Open Cup

Lower explosion limit : Not applicable

Upper explosion limit : Not applicable

Oxidizing properties : No

Autoignition temperature : 354 °C (669 °F)

Molecular formula : UVCB

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

Molecular Weight	: Varies
pH	: Not applicable
Melting point/range	: Not applicable
Boiling point/boiling range	: 419 °C (786 °F)
Vapor pressure	: 0,70 MMHG at 149 °C (300 °F)
Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 30,5 cSt at 40 °C (104 °F)
Relative vapor density	: 10 (Air = 1.0)
Evaporation rate	: No data available

10. STABILITY AND REACTIVITY**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.
Other data	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION**Synfluid® PAO 6 cSt**

Acute oral toxicity : LD50: > 5.000 mg/kg
Species: rat
Information given is based on data obtained from similar substances.

Synfluid® PAO 6 cSt

Acute inhalation toxicity : LC50: > 5,2 mg/l
Exposure time: 4 HR
Species: rat
Information given is based on data obtained from similar substances.

Synfluid® PAO 6 cSt

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

Acute dermal toxicity : LD50 Dermal: > 2.000 mg/kg
Species: rat
Information given is based on data obtained from similar substances.

Synfluid® PAO 6 cSt
Skin irritation : No skin irritation

Synfluid® PAO 6 cSt
Eye irritation : No eye irritation

Synfluid® PAO 6 cSt
Sensitization : Did not cause sensitization on laboratory animals.

Repeated dose toxicity

1-Decene Homopolymer Hydrogenated : Species: rat
Application Route: Oral
Dose: 0, 8000, 20000, 50000 ppm
Exposure time: 28 day
Number of exposures: daily
NOEL: 6.245 mg/kg
Method: OECD Test Guideline 407

Species: rat
Application Route: oral gavage
Dose: 0, 1000, 7000, 50000 ppm
Exposure time: 13 weeks
Number of exposures: daily
NOEL: 4.159,4 mg/kg
Method: OCED Guideline 408

Carcinogenicity

1-Decene Homopolymer Hydrogenated : Remarks: This information is not available.

Reproductive toxicity

1-Decene Homopolymer Hydrogenated : Species: rat
Application Route: oral gavage
Dose: 0, 100, 500, 1000 mg/kg
Number of exposures: daily
Test period: 10 weeks
Method: OECD Test Guideline 415
NOAEL Parent: 1.000 mg/kg

Teratogenicity

1-Decene Homopolymer Hydrogenated :

Synfluid® PAO 6 cSt
Aspiration toxicity : No aspiration toxicity classification.

CMR effects

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

1-Decene Homopolymer Hydrogenated : Carcinogenicity: Not classifiable as a human carcinogen.
 Mutagenicity: Animal testing did not show any mutagenic effects.
 Teratogenicity: Not available
 Reproductive toxicity: No toxicity to reproduction

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

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

Toxicity to daphnia and other aquatic invertebrates.

1-Decene Homopolymer Hydrogenated : EL50: > 1.000 mg/l
 Exposure time: 48 HR
 Species: Daphnia magna (Water flea)
 static test Method: OECD Test Guideline 202

Toxicity to algae : EC50: > 1.000 mg/l
 Exposure time: 96 HR
 Species: Selenastrum capricornutum (algae)

Elimination information (persistence and degradability)**Bioaccumulation**

1-Decene Homopolymer Hydrogenated : This material is not expected to bioaccumulate.

Biodegradability : This material is not expected to be readily biodegradable.
 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 : This material is not expected to be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

|| 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, 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.
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Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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
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**Further information**

Legacy MSDS Number : 3333

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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 Substances in China	TLV	Threshold Limit Value
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%		

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC0:** Other Process or activity
 Article category : **AC 0:** Other Articles
 Environmental release category : **ERC2:** Formulation of preparations

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario****1. Short title of Exposure Scenario:**

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC5:** Mixing or blending in batch processes for formulation of mixtures and articles (multistage and/or significant contact)E Industrial setting;
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario****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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

Amount used

Remarks : Not applicable

3. Exposure estimation and reference to its source

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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:

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC6:** Calendering operations
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

Further information

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

: 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, 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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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 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	: 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

MSDS Number:100000010952

15/38

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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:

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC7:** Industrial spraying
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

1. Short title of Exposure Scenario:

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC8:** Transfer of substance or mixture (charging/discharging) from/to vessels (large containers at non dedicated facilities; Industrial or non-industrial setting;
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**1. Short title of Exposure Scenario: **Formulation**Main User Groups : **SU 3:** Industrial uses: Uses of substances as such or in

MSDS Number: 100000010952

16/38

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

Sector of use	: preparations at industrial sites 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 of substance or preparation into small containers (dedicated filling line, including weighing), Production of mixtures or articles by tableting, compression, extrusion,

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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 cleaning, maintenance and associated laboratory activities.

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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:

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products

Product category : **PC0:** Other (use UCN codes)

Process category : **PROC9:** Transfer of substance or mixture into small containers (dedicated filling line, including weighing)E Industrial setting;

Article category : **AC 0:** Other Articles

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario****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	:	<p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>: PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p> <p>: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC10: Roller application or brushing</p> <p>PROC11: Non industrial spraying</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC15: Use as laboratory reagent</p> <p>PROC19: Hand-mixing with intimate contact and only PPE available</p>
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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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:

Sector of use : **SU 0-1:** Other activity related to manufacturing of chemical products
 Product category : **PC24:** Lubricants, greases, release products
 Process category : **PROC0:** Other Process or activity
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set**

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

by the Exposure Scenario**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

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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:

Sector of use : **SU 10:** Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC0:** Other Process or activity
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

1. Short title of Exposure Scenario:

Sector of use : **SU22:** Public domain (administration, education, entertainment, services, craftsmen)
 Product category : **PC0:** Other (use UCN codes)
 Process category : **PROC0:** Other Process or activity
 Article category : **AC 0:** Other Articles

3. Exposure estimation and reference to its source

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

- 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 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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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) 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,

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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	:	<p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC10: Roller application or brushing</p> <p>PROC11: Non industrial spraying</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC17: Lubrication at high energy conditions and in partly open process</p>
Environmental release category	:	ERC8a, ERC8d, ERC9a, ERC9b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

Further information : 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
: 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 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**

MSDS Number:10000010952

30/38

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

Sector of use : preparations at industrial sites
 : **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****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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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 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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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.

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

MSDS Number:100000010952

33/38

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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.

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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.

Synfluid® PAO 6 cSt

Version 3.0

Revision Date 2011-03-02

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

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.

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Version 3.0

Revision Date 2011-03-02

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

Remarks: Not applicable

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

Not applicable