SAFETY DATA SHEET
NESTE BASECOMP 12 H

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

1.1. Product identifier

Product name	NESTE BASECOMP 12 H
Chemical name	Lubricating oils (petroleum), C20-50, hydrotreated neutral oilbased
Product number	ID 17074
Internal identification	4213
REACH registration number	01-2119474889-13-XXXX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Formulation & (re)packing of substances and mixtures, Road and construction applications Water treatment chemicals Explosives manufacture & use

1.3. Details of the supplier of the safety data sheet

Supplier	Neste Markkinointi Oy Keilaranta 21, Espoo, P.O.B. 95, FIN-00095 NESTE, FINLAND Tel. +358 10 45811 lubetec@neste.com

1.4. Emergency telephone number

National emergency telephone number	+358-9-471 977, +358-9-4711, Poison Information Centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Asp. Tox. 1 - H304
Environmental hazards	Not Classified

2.2. Label elements

Pictogram

Signal word	Danger
Hazard statements	H304 May be fatal if swallowed and enters airways.
Precautionary statements	P102 Keep out of reach of children. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting. P501 Dispose of contents/ container in accordance with national regulations.

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2.3. Other hazards

Other hazards Oil mist: May cause eye and respiratory system irritation. Repeated exposure may cause skin dryness or cracking. Risk of soil and ground water contamination.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based **100,0%**

CAS number: 72623-87-1 EC number: 276-738-4 REACH registration number: 01-2119474889-13-XXXX

Classification
Asp. Tox. 1 - H304

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Other information A petroleum product., DMSO < 3% (IP 346).

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature. If spray/mist has been inhaled, proceed as follows. Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms are severe or persist.

Ingestion Do not induce vomiting. Get medical attention.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing. Contact with hot product can cause serious thermal burns.

Eye contact Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information Oil mist: May cause eye and respiratory system irritation. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Not known.

Hazardous combustion products Carbon dioxide (CO2). Carbon monoxide (CO).

5.3. Advice for firefighters

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Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid breathing mist. Wear adequate protective equipment at all operations.

For emergency responders Prevent unauthorized access. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge.

6.2. Environmental precautions

Environmental precautions Avoid release to the environment. Stop leak if safe to do so. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air). Risk of soil and ground water contamination.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Immediately start clean-up of the liquid and contaminated soil. Large spills should be collected mechanically (remove by pumping) for disposal. Small Spillages: Absorb spillage with sand or other inert absorbent.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Use only in well-ventilated areas. Avoid inhalation of vapours and contact with skin and eyes. Use personal protective equipment and/or local ventilation when needed. Do not eat, drink or smoke when using this product. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in accordance with local regulations. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Take precautions against leakage by constructing collecting pools and sewerage systems as well as by surfacing the loading and unloading stations. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from light. Suitable container materials: Stainless steel.

7.3. Specific end use(s)

Specific end use(s) Not known.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Oil mist: 5 mg/m3 (8h) HTP 2016/FIN.
5 mg/m³, TWA PEL (OSHA) 5 mg/m³, TLV-TWA (ACGIH) 10 mg/m³, TLV-STEL (ACGIH).

PNEC Not available.

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1)

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DNEL	Workers - Inhalation; Long term local effects: 5,4 mg/m³, (8h), Aerosol Consumer - Inhalation; Long term local effects: 1,2 mg/m³, (24h), Aerosol Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects.

8.2. Exposure controls

Appropriate engineering controls	Use only in well-ventilated areas. Use personal protective equipment and/or local ventilation when needed.
Eye/face protection	Tight-fitting safety glasses.
Hand protection	Wear protective gloves. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Nitrile rubber. Change protective gloves regularly. Protective gloves according to standards EN 420 and EN 374.
Other skin and body protection	Protective clothing when needed. Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Respiratory protection	Oil mist: Combination filter, type A2/P2. Filter device could be used maximum 2 hours at a time. Filter devices must not be used in conditions where the oxygen level is low (< 19 vol.-%). At high concentrations a breathing apparatus must be used (self-contained or fresh air hose breathing apparatus). Filter must be changed often enough. Respirators according to standards EN 140 and EN 141.
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless. Clear.
Odour	Almost odourless.
Odour threshold	-
pH	-
Melting point	Pour point ≤ -24°C (ASTM D-97)
Initial boiling point and range	270-430°C
Flash point	> 180°C (ASTM D-92).
Upper/lower flammability or explosive limits	-
Vapour pressure	< 0,1 hPa @ 20°C
Vapour density	-
Relative density	0,82-0,84 @ 15°C (ASTM D-4052).
Solubility(ies)	Insoluble in water.
Partition coefficient	log Kow: > 6
Auto-ignition temperature	-
Decomposition Temperature	-

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Viscosity	Kinematic viscosity typical value 12 mm2/s @ 40°C (ASTM D-445). Dynamic viscosity ~22 mPa s @ 20°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	Keep away from heat, sparks and open flame.

10.5. Incompatible materials

Materials to avoid	Strong acids. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation	Based on available data the classification criteria are not met. (OECD 404) Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met. (OECD 405) Oil mist: May cause eye and respiratory system irritation.

Skin sensitisation

Skin sensitisation	Based on available data the classification criteria are not met. (OECD 406)

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met. (OECD 471, 473, 476)
Genotoxicity - in vivo	Based on available data the classification criteria are not met. (OECD 474)

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met. (OECD 451, 453)
IARC carcinogenicity	Not listed.
NTP carcinogenicity	Not listed.

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Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met. (OECD 421)

Reproductive toxicity - development Based on available data the classification criteria are not met. (OECD 414)

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. (OECD 408, 410, 411, 412, 453)

Aspiration hazard

Aspiration hazard Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Toxicological information on ingredients.

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} > 5000 mg/kg, Oral, Rat (OECD 401)

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} > 2000 mg/kg, Dermal, Rabbit (OECD 402)

Acute toxicity - inhalation

Notes (inhalation LC_{50}) LC_{50} > 5,53 mg/l, Inhalation, Rat (OECD 403)

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met.

Ecological information on ingredients.

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based

Acute aquatic toxicity

Acute toxicity - fish LL_{50}, 96 hours: > 100 mg/l,
NOEL, 96 hours: ≥ 100 mg/l,
WAF (OECD 203)

Acute toxicity - aquatic invertebrates EL50, 48 hours: > 10000 mg/l, Daphnia magna
NOEL, 48 - 96 hours: ≥ 10000 mg/l,
LL_{50}, 24 - 96 hours: > 10000 mg/l,
WAF (OECD 202)

Acute toxicity - aquatic plants NOEL, 72 hours: ≥ 100 mg/l, Pseudokirchneriella subcapitata
WAF (OECD 201)

Acute toxicity - microorganisms NOEL, 10 minutes: > 1,93 mg/l, Micro-organisms (wastewater sludge)
(DIN 38412, DIN38409)

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOELR, 14 days: >= 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)

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Chronic toxicity - aquatic invertebrates	NOEL, 21 days: 10 mg/l, Daphnia magna WAF (OECD 211)

12.2. Persistence and degradability

Persistence and degradability	The product is slowly degradable.
Stability (hydrolysis)	No significant reaction in water.
Biodegradation	Non-rapidly degradable (OECD 301B)

12.3. Bioaccumulative potential

Bioaccumulative potential	Possibly bioaccumulative.
Partition coefficient	log Kow: > 6

12.4. Mobility in soil

Mobility	The product is insoluble in water. Mainly non-volatile. Product can penetrate soil until reaching the surface of ground water. The product contains substances which are bound to particulate matter and are retained in soil.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB. (Anthracene < 0,1 %)

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of this material and its container to hazardous or special waste collection point. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Waste packaging should be collected for reuse or recycling.

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

UN No. (ADR/RID)	-

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	-

14.3. Transport hazard class(es)

ADR/RID class	-

14.4. Packing group

ADR/RID packing group	-

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
Yes

Canada - DSL/NDSL
Yes
DSL

US - TSCA
Yes

Australia - AICS
Yes

Korea - KECI
Yes

China - IECSC
Yes

Philippines – PICCS
Yes

New Zealand - NZIOC
Yes

Other Inventories of Taiwan and Switzerland.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	PEL = Permissible Exposure Limit OSHA = Occupational Safety and Health Administration NTP = National Toxicology Program
Key literature references and sources for data	Regulations, databases, literature, own research. CONCAWE Report 10/14: Hazard classification and labelling of petroleum substances in the EEA - 2014. Chemical Safety Report Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, 2017.
Revision comments	Updated, sections: 1
Revision date	15/01/2018
Supersedes date	21/03/2016
SDS number	5630
Hazard statements in full	H304 May be fatal if swallowed and enters airways.

Exposure scenario
Formulation & (Re)packing of Substances and Mixtures

Identification

Product name Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based

CAS number 72623-87-1

Version number 2017

Es reference ES02

1. Title of exposure scenario

Main title Formulation & (Re)packing of Substances and Mixtures

Process scope Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

Environment

Environmental release category ERC2 Formulation of preparations.

SPERC ESVOC SpERC 2.2.v1

Worker

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.
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).
PROC14 Production of preparations or articles by tabletting, compression, extrusion, pelletisation.
PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 24 000 tonnes/year
Fraction of Regional tonnage used locally: 1
Annual site tonnage: 24 000 tonnes
Maximum daily site tonnage: 80 tonnes

Frequency and duration of use

Formulation & (Re)packing of Substances and Mixtures

Continuous release.
Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements): 0.0025
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.00002
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0.0001

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used. Risk from environmental exposure is driven by freshwater sediment.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 94.7% Removal efficiency (total): 94,7% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 1 200 tonne/day Assumed domestic sewage treatment plant flow (m³/day): 2000.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Treat air emission to provide a typical removal efficiency of 0%.
Water	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 23,4 If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Prevent discharge of undissolved substance to or recover from onsite waste water.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery method	External recovery and recycling of waste should comply with applicable local and/or national regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Risk management measures

	Avoid splashing. Avoid contact with contaminated tools and objects. Handle in accordance with good industrial hygiene and safety practice. Assumes a good basic standard of occupational hygiene is implemented. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Additional advice	Do not ingest. If swallowed, then seek immediate medical assistance.

Formulation & (Re)packing of Substances and Mixtures

3. Exposure estimation (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

Risk-driving RCR - air compartment driven RCR(air) ≤ 0.02
Risk-driving RCR - water compartment driven RCR(water) ≤ 0.068

4. Guidance to check compliance with the exposure scenario (Environment 1)

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Qualitative approach used to conclude safe use.

Exposure scenario
Use in Road and Construction Applications - Professional

Identification

Product name	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
CAS number	72623-87-1
Version number	2017
Es reference	ES15

1. Title of exposure scenario

Main title	Use in Road and Construction Applications - Professional
Process scope	Application of surface coatings and binders in road and construction activities, including paving uses, manual mastic and in the application of roofing and water-proofing membranes.

Environment

Environmental release category	ERC8d Wide dispersive outdoor use of processing aids in open systems. ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix.
SPERC	ESVOC SpERC 8.15.v1

Worker

Process category	PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities. PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC10 Roller application or brushing of adhesive and other coating. PROC11 Spraying outside industrial settings and/or applications. PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 0.1 tonnes/year
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage: 0.00005 tonnes
Maximum daily site tonnage: 0.14 g

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from wide dispersive use (regional only): 0.95
Emission factor - water	Release fraction to wastewater from wide dispersive use: 0.01
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.04

Use in Road and Construction Applications - Professional

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used. Risk from environmental exposure is driven by freshwater sediment.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 94.7% Removal efficiency (total): 94,7% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 0.03 kg/day Assumed domestic sewage treatment plant flow (m³/day): 2000.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Not determined.
Water	No wastewater treatment required.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery method	External recovery and recycling of waste should comply with applicable local and/or national regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Risk management measures

	Avoid splashing. Avoid contact with contaminated tools and objects. Handle in accordance with good industrial hygiene and safety practice. Assumes a good basic standard of occupational hygiene is implemented. Supervision in place to check that the RMMs in place are being used correctly and OCs followed.
Additional advice	Do not ingest. If swallowed, then seek immediate medical assistance.

3. Exposure estimation (Environment 1)

Assessment method	Used Petrorisk model. (Hydrocarbon Block Method) Risk-driving RCR - air compartment driven RCR(air) ≤ 0.0022 Risk-driving RCR - water compartment driven RCR(water) ≤ 0.0039

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use in Road and Construction Applications - Professional

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Qualitative approach used to conclude safe use.

Exposure scenario
Use in Water Treatment Chemicals - Industrial

Identification

Product name	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
CAS number	72623-87-1
Version number	2017
Es reference	ES22a

1. Title of exposure scenario

Main title	Use in Water Treatment Chemicals - Industrial
Process scope	Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging

Environment

Environmental release category	ERC4 Industrial use of processing aids in processes and products, not becoming part of articles.
SPERC	ESVOC SpERC 3.22a.v1

Worker

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. 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. PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 0.1 tonnes/year
Fraction of Regional tonnage used locally: 1
Annual site tonnage: 0.1 tonnes
Maximum daily site tonnage: 0.33 kg

Frequency and duration of use

Continuous release.
Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.05
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.95

Use in Water Treatment Chemicals - Industrial

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Good practice Common practices vary across sites, thus conservative process release estimates used.

Risk from environmental exposure is driven by freshwater sediment.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 94.7%
Removal efficiency (total): 94.7%
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 19 kg/day
Assumed domestic sewage treatment plant flow (m³/day):
2000.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Treat air emission to provide a typical removal efficiency of 0%.

Water No wastewater treatment required.

Soil Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery method External recovery and recycling of waste should comply with applicable local and/or national regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Risk management measures

Avoid splashing.
Avoid contact with contaminated tools and objects.
Handle in accordance with good industrial hygiene and safety practice.
Assumes a good basic standard of occupational hygiene is implemented.
Supervision in place to check that the RMMs in place are being used correctly and OCs followed.

Additional advice Do not ingest. If swallowed, then seek immediate medical assistance.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model. (Hydrocarbon Block Method)

Risk-driving RCR - air compartment driven RCR(air) ≤ 0.014
Risk-driving RCR - water compartment driven RCR(water) ≤ 0.017

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use in Water Treatment Chemicals - Industrial

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Qualitative approach used to conclude safe use.

Exposure scenario
Use in Water Treatment Chemicals - Professional

Identification

Product name	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
CAS number	72623-87-1
Version number	2017
Es reference	ES22b

1. Title of exposure scenario

Main title	Use in Water Treatment Chemicals - Professional
Process scope	Covers the use of the substance for the treatment of water in open and closed systems.

Environment

Environmental release category	ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix.
SPERC	ESVOC SpERC 8.22b.v1

Worker

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. 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. PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 0.1 tonnes/year
Fraction of Regional tonnage used locally: 1
Annual site tonnage: 0.1 tonnes
Maximum daily site tonnage: 0.27 kg

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from wide dispersive use (regional only): 0.01
Emission factor - water	Release fraction to wastewater from wide dispersive use: 0.99
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0

Environmental factors not influenced by risk management measures

Use in Water Treatment Chemicals - Professional

Dilution

Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Good practice

Common practices vary across sites, thus conservative process release estimates used.

Risk from environmental exposure is driven by freshwater sediment.

STP details

Estimated substance removal from wastewater via domestic sewage treatment: 94.7%
Removal efficiency (total): 94,7%
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 18 kg/day
Assumed domestic sewage treatment plant flow (m^3/day):
2000.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air

Not determined.

Water

No wastewater treatment required.

Soil

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery method

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Risk management measures

Avoid splashing.
Avoid contact with contaminated tools and objects.
Handle in accordance with good industrial hygiene and safety practice.
Assumes a good basic standard of occupational hygiene is implemented.
Supervision in place to check that the RMMs in place are being used correctly and OCs followed.

Additional advice

Do not ingest. If swallowed, then seek immediate medical assistance.

3. Exposure estimation (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

Risk-driving RCR - air compartment driven RCr(air) ≤ 0.0066
Risk-driving RCR - water compartment driven RCR(water) ≤ 0.015

4. Guidance to check compliance with the exposure scenario (Environment 1)

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Use in Water Treatment Chemicals - Professional

3. Exposure estimation (Health 1)

Qualitative approach used to conclude safe use.

Exposure scenario
Explosives Manufacture and Use - Professional

Identification

Product name Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based

CAS number 72623-87-1

Version number 2017

Es reference ES18b

1. Title of exposure scenario

Main title Explosives Manufacture and Use - Professional

Process scope Covers exposures arising from the manufacture and use of slurry explosives (including materials transfer, mixing and charging) and equipment cleaning.

Environment

Environmental release category ERC8e Wide dispersive outdoor use of reactive substances in open systems.

SPERC Not determined.

Worker

Process category

PROC1 Use in closed process, no likelihood of exposure.
PROC3 Use in closed batch process (synthesis or formulation).
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 0.1 tonnes/year
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage: 0.00005 tonnes
Maximum daily site tonnage: 0.14 g

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from wide dispersive use (regional only): 0.001

Emission factor - water Release fraction to wastewater from wide dispersive use: 0.02

Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 0.01

Environmental factors not influenced by risk management measures

Explosives Manufacture and Use - Professional

Dilution

Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Good practice

Common practices vary across sites, thus conservative process release estimates used.

Risk from environmental exposure is driven by freshwater sediment.

STP details

Estimated substance removal from wastewater via domestic sewage treatment: 94.7%
Removal efficiency (total): 94,7%
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 0.03 kg/day
Assumed domestic sewage treatment plant flow (m³/day):
2000.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air

Not determined.

Water

No wastewater treatment required.

Soil

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery method

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Risk management measures

Avoid splashing.
Avoid contact with contaminated tools and objects.
Handle in accordance with good industrial hygiene and safety practice.
Assumes a good basic standard of occupational hygiene is implemented.
Supervision in place to check that the RMMs in place are being used correctly and OCs followed.

Additional advice

Do not ingest. If swallowed, then seek immediate medical assistance.

3. Exposure estimation (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

Risk-driving RCR - air compartment driven RCR(air) ≤ 0.0022
Risk-driving RCR - water compartment driven RCR(water) ≤ 0.0039

4. Guidance to check compliance with the exposure scenario (Environment 1)

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Explosives Manufacture and Use - Professional

3. Exposure estimation (Health 1)

Qualitative approach used to conclude safe use.