


SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
 CAS: Non-applicable
 EC: 920-901-0
 Index: Non-applicable
 REACH: 01-2119456810-40-XXXX
Other means of identification:
 Non-applicable
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
 Relevant uses: Industrial cleaning solvent; degreaser
 Uses advised against: All uses not specified in this section or in section 7.3
 Please see the annex for detailed information about the specific and safe usage of the product.
- 1.3 Details of the supplier of the safety data sheet:**
 Arrow Solutions
 Rawdon Road, Moira,
 DE12 6DA, Swadlincote - Derbyshire - United Kingdom
 Phone: 01283 221044
 sales@arrowchem.com
 www.arrowchem.com
- 1.4 Emergency telephone number:**

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
CLP Regulation (EC) No 1272/2008:
 Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1, H304
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
 Danger

Hazard statements:
 Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Precautionary statements:
 P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P310: Immediately call a POISON CENTER/doctor.
 P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.
Supplementary information:
 EUH066: Repeated exposure may cause skin dryness or cracking.
Labelling for contents:
- | Component | Concentration interval |
|------------------------|------------------------|
| Aliphatic hydrocarbons | % (w/w) >= 30 |
- 2.3 Other hazards:**
 Product fails to meet PBT/vPvB criteria
 Endocrine-disrupting properties: The product fails to meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**

- CONTINUED ON NEXT PAGE -

**Lotoxane
C043**

Date of compilation: 28/02/23 Version: 1

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Chemical description: Solvent/s

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: Non-applicable EC: 920-901-0 Index: Non-applicable REACH: 01-2119456810-40-XXXX	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics Self-classified	100 %
	Regulation 1272/2008 Asp. Tox. 1: H304; EUH066 - Danger	

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

3.2 Mixture:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

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SECTION 5: FIREFIGHTING MEASURES (continued)

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilled product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 4 °C

Maximum Temp.: 40 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Please see the annex for detailed information about handling, storage and specific end uses.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

There are no applicable occupational exposure limits for the substances contained in the product

DNEL (Workers):

Non-applicable

DNEL (General population):

Non-applicable

PNEC:

Non-applicable

8.2 Exposure controls:



A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.



B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.



C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+A1:2018



D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Transparent
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	197 °C
Vapour pressure at 20 °C:	6 Pa
Vapour pressure at 50 °C:	64.5 Pa (0.06 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	786 kg/m ³
Relative density at 20 °C:	0.786
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Insoluble in water
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	-114 °C

Flammability:

Flash Point:	≥68 °C (ASTM D-93)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	222 °C (ASTM E 659-78)
Lower flammability limit:	>0.6 % Volume
Upper flammability limit:	<7 % Volume

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

Other safety characteristics:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Repeated exposure may cause skin dryness or cracking

H- Aspiration hazard:

The consumption of a considerable dose can cause pulmonary damage.

Other information:

Non-applicable

Product-specific toxicological information:

Acute toxicity		Genus
LD50 oral	>5000 mg/kg	Rat
LD50 dermal	>5000 mg/kg	Rat
LC50 inhalation	>5000 mg/L (4 h)	Rat

Specific toxicology information on the substances:

Not available

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Not available

12.2 Persistence and degradability:

Not available

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

Not available

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
07 06 04*	other organic solvents, washing liquids and mother liquors	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID,IMDG,IATA)

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Regulation (EC) No 648/2004 on detergents:

In accordance with this regulation the product complies with the following:

Labelling for contents:

Component	Concentration interval
Aliphatic hydrocarbons	% (w/w) >= 30

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885

Control of Substances Hazardous to Health Regulations 2002 (as amended)

EH40/2005 Workplace exposure limits

The Waste Regulations 2011, 2011 No. 988

COSHH-SR24 Storing chemical products (small scale).

COSHH-SR2 Diluting chemical concentrates.

COSHH-SR4 Manual cleaning and disinfecting surfaces.

Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products

Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents

Commission Regulation (EC) No 907/2006 of 20 June 2006 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes III and VII

Commission Regulation (EC) No 551/2009 of 25 June 2009 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes V and VI thereto (surfactant derogation)

15.2 Chemical safety assessment:

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SECTION 15: REGULATORY INFORMATION (continued)

The provider has carried out a chemical safety assessment

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H304: May be fatal if swallowed and enters airways.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

ANNEX: EXPOSURE SCENARIO

Title: Lotoxane Exposure Scenario
Substance Name: Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Date: 27/02/2023
Version 2

1. Short title of Exposure Scenario 1: Distribution of substance		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products) SU9: Manufacture of fine chemicals	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Environmental Release Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC3: Formulation in materials ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b: Industrial use of reactive processing aids ERC6c: Industrial use of reactive processing aids ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7: Industrial use of substances in closed systems	
Activity	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.	
2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7		
No exposure assessment presented for the environment		
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15		
	Concentration of the substance in	Covers percentage substance in the product

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ANNEX: EXPOSURE SCENARIO (continued)

Product characteristics	mixture/article	up to 100%
	Physical Form (at time of use)	Liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent/limit releases, dispersion and exposure	General measures (Aspiration hazard)	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived. Risks from physicochemical hazards of substances can be controlled by implementing risk management measures. For substance classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed then seek immediate medical attention. Do NOT induce vomiting.

3. Exposure estimation and reference to its source

Environment

No exposure assessment presented for the environment.

Workers

No exposure assessment presented for human health.

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

Health

Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 2: Use in cleaning agents

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or
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ANNEX: EXPOSURE SCENARIO (continued)		
Process categories	formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring	
Environmental Release Categories	ERC4: industrial use of processing aids in processes and products, not becoming part of articles	
Activity	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).	
2.1 Contributing scenario controlling environmental exposure for: ERC2		
No exposure assessment presented for the environment		
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13		
Product characteristics	Concentration of the substance in mixture/article	Covers percentage substance in the end product up to 100%
	Physical Form (at time of use)	Liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent/limit release, dispersion and exposure	General measures (Aspiration hazard)	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived. Risks from physicochemical hazards of substances can be controlled by implementing risk management measures. For substance classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed then seek immediate medical attention. Do NOT induce vomiting.
3. Exposure estimation and reference to its source		

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ANNEX: EXPOSURE SCENARIO (continued)

Environmental
No exposure assessment presented for the environment.
Workers
No exposure assessment presented for human health
4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario
Health Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Additional good practice advice beyond the REACH Chemical Safety Assessment
Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 3: Use in Cleaning Agents	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process, without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch process with occasional controlled exposure or processes with equivalent containment condition 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 PROC10: Roller application or brushes PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand)
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d	
No exposure assessment presented for the environment.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13	

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ANNEX: EXPOSURE SCENARIO (continued)

Product characteristics	Concentration of the substance in mixture/article	Covers percentage substance in the product up to 100%.
	Physical Form (at time of use)	Liquid
3. Exposure estimation and reference to its source		
Environment		
No exposure assessment presented for the environment		
Workers		
No exposure assessment presented for human health		
4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario		
Health Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.		
Additional good practice advice beyond the REACH Chemical Safety Assessment		
Assumes a good basic standard of occupational hygiene is implemented.		

1. Short title of Exposure Scenario 4: Formulation & (re) packing of substances and mixtures

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of end-use	SU 10: Formulation [mixing] of preparations and/or re-packing (excluding alloys)
Process categories	<p>PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Manufacture or formulation in the chemical industry in closed batch process with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC9: Transfer of substances or preparation into small containers (dedicated filling line, including</p>

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ANNEX: EXPOSURE SCENARIO (continued)		
		weighing) PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent
Environmental Release Categories		ERC2: Formulation of preparations
Activity		Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfer, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
No exposure assessment presented for the environment.		
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC14		
Product characteristics	Concentration of the substance in mixture/article	Covers percentage substance in the product up to 100%
	Physical Form (at time of use)	Liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent/limit releases, dispersion and exposure	General measures (Aspiration hazard)	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived. Risks from physicochemical hazards of substances can be controlled by implementing risk management measures. For substance classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed then seek

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ANNEX: EXPOSURE SCENARIO (continued)

immediate medical attention. Do NOT induce vomiting.

3. Exposure estimation and reference to its source

Environment

No exposure assessment presented for the environment.

Workers

No exposure assessment presented for human health.

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

Health

Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -