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

· **1.1 Product identifier**

· **Trade name: TWIN AIR BIO LIQUID POWER SPRAY**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture**
Only for proper handling.
Air filter oil

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

MOTOREX AG
Bern–Zürich–Strasse 31, Postfach
CH–4901 Langenthal
Tel. +41 (0)62 919 75 75
www.motorex.com

· **Further information obtainable from:** msds@motorex.com
· **1.4 Emergency telephone number:**
In case of a medical emergency following exposure to a chemical, the public should call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 (UK only).

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Skin Irrit. 2	H315	Causes skin irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**

GHS02 GHS07 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Hydrocarbons, C6, isoalkanes, <5% of n-hexane
· **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

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P103 Read carefully and follow all instructions.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P405 Store locked up.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 92128-66-0 EC number: 921-024-6 Reg.nr.: 01-2119475514-35	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥20-<25%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32	butane, pure Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-25%
CAS: 92128-67-1 EC number: 927-510-4 Reg.nr.: 01-2119475515-33	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥10-<20%
EC number: 931-254-9 Reg.nr.: 01-2119484651-34	Hydrocarbons, C6, isoalkanes, <5% of n-hexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥5-<10%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	2.5-7.5%

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**	
aliphatic hydrocarbons	≥5 - <15%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.

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· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** No special measures required.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **Storage class:** 2 B
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
106-97-8 butane, pure	
WEL	Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)

· **DNELs**		
Hydrocarbons, C6, isoalkanes, <5% of n-hexane		
Oral	DNEL/general population/Systemic effects/Long-term	1,301 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Systemic effects / Long-term	13,964 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	1,377 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	5,306 mg/m3 (worker)
	DNEL/general population/Systemic effects/Long-term	1,131 mg/m3 (consumer)

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Not necessary if room is well-ventilated.
Respiratory protection if formation of aerosol or mist: use mask with filter type A2, A2/P2 or ABEK.
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye/face protection** Not required.
· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Aerosol
· **Colour:**	Green
· **Odour:**	Solvent-like
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	Not applicable, as aerosol.
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	<-25 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Consistency**	
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Heat Capacity**	
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 20 °C:**	0.709 g/cm³ (ASTM D 4052)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Liquefied gas
· **Important information on protection of health and environment, and on safety.**	
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Change in condition**	
· **Evaporation rate**	Not applicable.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Extremely flammable aerosol. Pressurised container: May burst if heated.
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void

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· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity**

· **LD/LC50 values relevant for classification:**		
106-97-8 butane, pure		
Inhalative	LC50 / 15 min	1,442.738-1.443 mg/l (rat)
	LC50 / 15 min	800,000 ppm (rat)
	LC50 / 2h	1,237 mg/l (mouse)
	LC50 / 2h	520,400-539,600 ppm (mouse)
	LC50 / 4h	658 mg/l (rat)
	NOAEC	4,000-16,000 ppm (rat)
	NOAEC	7.2-21.4 mg/l (rat)
	LOAEC	21.6 mg/l (rat)
	LOAEC	12,000 ppm (rat)
Hydrocarbons, C6, isoalkanes, <5% of n-hexane		
Oral	LD50	25 ml/kg (rat)
Dermal	LD50	5 ml/kg (rabbit)
Inhalative	LC50 / 4h	73,860 ppm (rat)
	NOAEC	8,992 ppm (mouse)
		2,984-8,992 ppm (rat)
	LOAEC	8,992 ppm (rat)
74-98-6 propane		
Inhalative	LC50 / 15 min	1,442.738-1.443 mg/l (rat)
	LC50 / 15 min	800,000 ppm (rat)
	LC50 / 2h	1,237 mg/l (mouse)
	LC50 / 2h	520,400-539,600 ppm (mouse)
	NOAEC	4,000-16,000 ppm (rat)

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	NOAEC	7.214-21.394 mg/l (rat)
	LOAEC	21.64 mg/l (rat)
	LOAEC	12,000 ppm (rat)

· **Skin corrosion/irritation** Causes skin irritation.
· **STOT-single exposure** May cause drowsiness or dizziness.
· **Aspiration hazard** May be fatal if swallowed and enters airways.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**		
540-97-6	Dodecamethylcyclohexasiloxane	List II
541-02-6	2,2,4,4,6,6,8,8,10,10-decamethylcyclopentasiloxane	List II
556-67-2	octamethylcyclotetrasiloxane	List II, III

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
106-97-8 butane, pure	
LC50	24.1-147.5 mg/l/96h (fish)
LC50	14.2-69.4 mg/l/48h (aquatic invertebrates)
EC50	7.7-19.4 mg/l/96h (algae / cyanobacteria)
Hydrocarbons, C6, isoalkanes, <5% of n-hexane	
LL50	18.27 mg/l/96h (fish)
EL50	31.9 mg/l/48h (aquatic invertebrates)
EL50	13.56 mg/l/72h (algae / cyanobacteria)
NOELR	4.089 mg/l/28d (fish)
NOELR	7.138 mg/l/21d (aquatic invertebrates)
NOELR	3.034 mg/l/72h (algae / cyanobacteria)
74-98-6 propane	
LC50	24.11-147.54 mg/l/96h (fish)
LC50	14.22-69.43 mg/l/48h (aquatic invertebrates)
EC50	7.71-19.37 mg/l/96h (algae / cyanobacteria)

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential**	
106-97-8 butane, pure	
Partition coefficient	1.09-2.8 [---] (log Kow) (Bioaccumulation)
Hydrocarbons, C6, isoalkanes, <5% of n-hexane	
Partition coefficient	3.6 [---] (log Kow) (Bioaccumulation)
Biodegradability	>80 % (28d) (Biodegradability) (OECD 301 F)
74-98-6 propane	
Partition coefficient	1.09-2.8 [---] (log Kow) (Bioaccumulation)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
For information on endocrine disrupting properties see section 11.
· **12.7 Other adverse effects**
· **Remark:** Toxic for fish

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· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (according to Appendix 1 AWSV): significantly hazardous to water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Return product and/or partially emptied container in original packaging to the point of sale or hand it over to a collection point for special waste.

· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Discharged containers can contain flammable or explosive vapours.

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SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR/RID/ADN, IMDG, IATA**	UN1950
· **14.2 UN proper shipping name**	
· **ADR/RID/ADN**	1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	AEROSOLS, MARINE POLLUTANT
· **IATA**	AEROSOLS, flammable
· **14.3 Transport hazard class(es)**	
· **ADR/RID/ADN**	

· **Class**	2 5F Gases.
· **Label**	2.1
· **IMDG**	

· **Class**	2.1 Gases.
· **Label**	2.1

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· **IATA**

· **Class**	2.1 Gases.
· **Label**	2.1
· **14.4 Packing group**	
· **ADR/RID/ADN, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances: Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADR/RID/ADN):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Gases.
· **Hazard identification number (Kemler code):**	-
· **EMS Number:**	F-D,S-U
· **Stowage Code**	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· **Segregation Code**	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR/RID/ADN**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **Transport category**	2
· **Tunnel restriction code**	D
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **UN "Model Regulation":**	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category**
P3a FLAMMABLE AEROSOLS
E2 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008.
No special training instructions to ensure protection of human health and environment are required.

· **purity requirement**
· **Relevant phrases**
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Abteilung Produktsicherheit
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1A: Flammable gases – Category 1A
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
· *** Data compared to the previous version altered.**

Annex: Exposure scenario 1

· **Short title of the exposure scenario** Industrial use of sprays

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· **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· **Product category**
PC14 Metal surface treatment products
PC34 Textile dyes, and impregnating products
· **Process category** PROC11 Non industrial spraying
· **Environmental release category**
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Fluid
· **Concentration of the substance in the mixture** The substance is main component.
· **Other operational conditions**
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting consumer exposure** Not required.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures** No special measures required.
· **Personal protective measures** No special measures required.
· **Measures for consumer protection** No special measures required.
· **Environmental protection measures**
· **Air** No special measures required.
· **Water** No special measures required.
· **Disposal measures** Ensure that waste is collected and contained.
· **Disposal procedures** Dispose of product residues with household waste.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.

Annex: Exposure scenario 2

· **Short title of the exposure scenario** Professional use of sprays
· **Sector of Use**
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· **Product category**
PC14 Metal surface treatment products
PC34 Textile dyes, and impregnating products
· **Process category** PROC11 Non industrial spraying
· **Environmental release category**
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Fluid
· **Concentration of the substance in the mixture** The substance is main component.

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· **Other operational conditions**
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting consumer exposure** Not required.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures** No special measures required.
· **Personal protective measures** No special measures required.
· **Measures for consumer protection** No special measures required.
· **Environmental protection measures**
· **Air** No special measures required.
· **Water** No special measures required.
· **Disposal measures** Ensure that waste is collected and contained.
· **Disposal procedures** Dispose of product residues with household waste.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.

Annex: Exposure scenario 3

· **Short title of the exposure scenario** Private use of sprays
· **Sector of Use** SU21 Consumer uses: Private households / general public / consumers
· **Product category**
PC14 Metal surface treatment products
PC34 Textile dyes, and impregnating products
· **Process category** PROC11 Non industrial spraying
· **Environmental release category**
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Fluid
· **Concentration of the substance in the mixture** The substance is main component.
· **Other operational conditions**
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting consumer exposure** Not required.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures** No special measures required.
· **Personal protective measures** No special measures required.
· **Measures for consumer protection** No special measures required.
· **Environmental protection measures**
· **Air** No special measures required.
· **Water** No special measures required.
· **Disposal measures** Ensure that waste is collected and contained.
· **Disposal procedures** Dispose of product residues with household waste.
· **Waste type** Partially emptied and uncleaned packaging

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· ***Exposure estimation***
· ***Consumer*** *Not relevant for this Exposure Scenario.*
· ***Guidance for downstream users*** *No further relevant information available.*

Annex: Exposure scenario 4

· ***Short title of the exposure scenario***
Industrial use of lubricants and greases in vehicles or machinery
· ***Sector of Use***
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· ***Product category***
PC16 Heat transfer fluids
PC17 Hydraulic fluids
PC24 Lubricants, greases, release products
· ***Process category***
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
· ***Environmental release category***
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC7 Use of functional fluid at industrial site
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***Conditions of use***
· ***Duration and frequency*** *5 workdays/week.*
· ***Physical parameters***
· ***Physical state*** *Fluid*
· ***Concentration of the substance in the mixture*** *The substance is main component.*
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** *No special measures required.*
· ***Other operational conditions affecting consumer exposure*** *Not required.*
· ***Other operational conditions affecting consumer exposure during the use of the product***
Not applicable.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures*** *No special measures required.*
· ***Technical protective measures*** *No special measures required.*
· ***Personal protective measures*** *No special measures required.*
· ***Measures for consumer protection*** *No special measures required.*
· ***Environmental protection measures***
· ***Air*** *No special measures required.*
· ***Water*** *No special measures required.*
· ***Disposal measures***
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· ***Disposal procedures*** *Dispose of product residues with household waste.*
· ***Waste type*** *Partially emptied and uncleaned packaging*
· ***Exposure estimation***
· ***Consumer*** *Not relevant for this Exposure Scenario.*
· ***Guidance for downstream users*** *No further relevant information available.*

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Annex: Exposure scenario 5

· **Short title of the exposure scenario**
Professional use of lubricants and greases in vehicles or machines
· **Sector of Use**
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· **Product category**
PC16 Heat transfer fluids
PC17 Hydraulic fluids
PC24 Lubricants, greases, release products
· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC20 Use of functional fluids in small devices
· **Environmental release category**
ERC9a Widespread use of functional fluid (indoor)
ERC9b Widespread use of functional fluid (outdoor)
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Fluid
· **Concentration of the substance in the mixture** The substance is main component.
· **Other operational conditions**
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting consumer exposure** Not required.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures** No special measures required.
· **Personal protective measures** No special measures required.
· **Measures for consumer protection** No special measures required.
· **Environmental protection measures**
· **Air** No special measures required.
· **Water** No special measures required.
· **Disposal measures**
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· **Disposal procedures** Dispose of product residues with household waste.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.

Annex: Exposure scenario 6

· **Short title of the exposure scenario** Private use of lubricants and greases in vehicles or machines
· **Sector of Use** SU21 Consumer uses: Private households / general public / consumers

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· **Product category** PC24 Lubricants, greases, release products
· **Environmental release category**
ERC9a Widespread use of functional fluid (indoor)
ERC9b Widespread use of functional fluid (outdoor)
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Fluid
· **Concentration of the substance in the mixture** The substance is main component.
· **Other operational conditions**
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting consumer exposure** Not required.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures** No special measures required.
· **Personal protective measures** No special measures required.
· **Measures for consumer protection** No special measures required.
· **Environmental protection measures**
· **Air** No special measures required.
· **Water** No special measures required.
· **Disposal measures**
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· **Disposal procedures** Dispose of product residues with household waste.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.

MOTOREX Oil of Switzerland

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

· **1.1 Product identifier**

· **Trade name: OEM TWIN AIR DIRT BIO REMOVER**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture**
Only for proper handling.
Cleaning material/ Detergent

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

MOTOREX AG
Bern–Zürich–Strasse 31, Postfach
CH–4901 Langenthal
Tel. +41 (0)62 919 75 75
www.motorex.com

· **Further information obtainable from:** msds@motorex.com
· **1.4 Emergency telephone number:**
In case of a medical emergency following exposure to a chemical, the public should call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 (UK only).

*

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Skin Irrit. 2 H315 Causes skin irritation.
Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Anionic surfactant
disodium metasilicate
· **Hazard statements**
H315 Causes skin irritation.
H318 Causes serious eye damage.
· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P264	Wash thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).

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P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

*
SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
EC number: 932-051-8 Reg.nr.: 01-2119565112-48-0000	Anionic surfactant Eye Dam. 1, H318; Skin Irrit. 2, H315	10%
CAS: 497-19-8 EINECS: 207-838-8 Index number: 011-005-00-2	sodium carbonate Eye Irrit. 2, H319	10%
CAS: 28348-53-0 EINECS: 248-983-7 Reg.nr.: 01-2120759186-46	sodium cumenesulphonate Eye Irrit. 2, H319	10%
CAS: 6834-92-0 EINECS: 229-912-9 Index number: 014-010-00-8	disodium metasilicate Skin Corr. 1B, H314; STOT SE 3, H335	≥2.5-<5%

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**	
phosphates	≥15 - <30%
anionic surfactants	≥5 - <15%
non-ionic surfactants	<5%
perfumes	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **5.2 Special hazards arising from the substance or mixture**
No further relevant information available.

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· ***5.3 Advice for firefighters***
· ***Protective equipment:*** *No special measures required.*

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective equipment. Keep unprotected persons away.
· ***6.2 Environmental precautions:*** *Do not allow to enter sewers/ surface or ground water.*
· ***6.3 Methods and material for containment and cleaning up:***
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling*** *Thorough dedusting.*
· ***Information about fire - and explosion protection:*** *No special measures required.*

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:*** *No special requirements.*
· ***Information about storage in one common storage facility:*** *Not required.*
· ***Further information about storage conditions:*** *Keep container tightly sealed.*
· ***Storage class:*** *11*
· ***7.3 Specific end use(s)*** *No further relevant information available.*

*
SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***
· ***Additional information about design of technical facilities:*** *No further data; see section 7.*
· ***Ingredients with limit values that require monitoring at the workplace:***
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**		
Anionic surfactant		
Oral	DNEL/general population/Systemic effects/Long-term	0.425 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Systemic effects / Long-term	85 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	42.5 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	6 mg/m3 (worker)
	DNEL/general population/Systemic effects/Long-term	1.5 mg/m3 (consumer)
497-19-8 sodium carbonate		
Inhalative	DNEL / Workers / Local Effects / Long-term	10 mg/m3 (worker)
	DNEL/general population/Local effects/Long-term	10 mg/m3 (consumer)
28348-53-0 sodium cumenesulphonate		
Oral	DNEL/general population/Systemic effects/Long-term	1.14 mg/kg/24h (consumer)
	DNEL/general pop/Systemic effects/acute-short term	70 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Local Effects / Long-term	4.49 mg/cm2 (worker)
	DNEL / Workers / Systemic effects / Long-term	32 mg/kg/24h (worker)
	DNEL/Workers/Systemic effects/acute-short term	20 mg/kg/24h (worker)

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	DNEL/general population/Systemic effects/Long-term	*16 mg/kg/24h (consumer)*
	DNEL/general pop/Systemic effects/acute-short term	*40 mg/kg/24h (consumer)*
	DNEL/general population/Local effects/Long-term	*0.45 mg/cm2 (consumer)*
Inhalative	*DNEL / Workers / Systemic effects / Long-term*	*4.02 mg/m3 (worker)*
	DNEL/Workers/Systemic effects/acute-short term	*770 mg/m3 (worker)*
	DNEL/Workers/Local effects/acute-short term	*770 mg/m3 (worker)*
	DNEL / Workers / Local Effects / Long-term	*4.02 mg/m3 (worker)*
	DNEL/general population/Systemic effects/Long-term	*1.98 mg/m3 (consumer)*
	DNEL/general pop/Systemic effects/acute-short term	*770 mg/m3 (consumer)*
	DNEL/general pop/Local effects/acute-short term	*770 mg/m3 (consumer)*
	DNEL/general population/Local effects/Long-term	*1.98 mg/m3 (consumer)*
6834-92-0 disodium metasilicate		
Oral	*DNEL/general population/Systemic effects/Long-term*	*0.74 mg/kg/24h (consumer)*
Dermal	*DNEL / Workers / Systemic effects / Long-term*	*1.49 mg/kg/24h (worker)*
	DNEL/general population/Systemic effects/Long-term	*0.74 mg/kg/24h (consumer)*
Inhalative	*DNEL / Workers / Systemic effects / Long-term*	*6.22 mg/m3 (worker)*
	DNEL/general population/Systemic effects/Long-term	*1.55 mg/m3 (consumer)*

· ***PNECs***

Anionic surfactant	
PNEC / Aquatic organisms / Freshwater	*0.268 mg/l (aquatic organisms)*
PNEC / Aquatic organisms / Marine water	*0.0268 mg/l (aquatic organisms)*
PNEC/Aquatic org/intermittent releases(freshwater)	*0.055 mg/l (aquatic organisms)*
PNEC/Aquatic organisms/Sewage treatment plant/STP	*5.6 mg/l (aquatic organisms)*
PNEC / Aquatic organisms / Sediment (freshwater)	*8.1 mg/kg (aquatic organisms)*
PNEC / Aquatic organisms / Sediment (marine water)	*8.1 mg/kg (aquatic organisms)*
PNEC / Terrestrial organism / Soil	*35 mg/kg (terrestrial organisms)*
28348-53-0 sodium cumenesulphonate	
PNEC / Aquatic organisms / Freshwater	*0.23 mg/l (aquatic organisms)*
PNEC / Aquatic organisms / Marine water	*0.023 mg/l (aquatic organisms)*
PNEC/Aquatic org/intermittent releases(freshwater)	*2.3 mg/l (aquatic organisms)*
PNEC/Aquatic organisms/Sewage treatment plant/STP	*160 mg/l (aquatic organisms)*
PNEC / Aquatic organisms / Sediment (freshwater)	*0.89 mg/kg (aquatic organisms)*
PNEC / Aquatic organisms / Sediment (marine water)	*0.089 mg/kg (aquatic organisms)*
6834-92-0 disodium metasilicate	
PNEC / Aquatic organisms / Freshwater	*7.5 mg/l (aquatic organisms)*
PNEC / Aquatic organisms / Marine water	*1 mg/l (aquatic organisms)*
PNEC/Aquatic organisms/Sewage treatment plant/STP	*1,000 mg/l (aquatic organisms)*

· ***Additional information:*** *The lists valid during the making were used as basis.*

· ***8.2 Exposure controls***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
· ***Respiratory protection:***
Not necessary if room is well-ventilated.

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Respiratory protection if formation of aerosol or mist: use mask with filter type A2, A2/P2 or ABEK.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

safety goggles

· **Body protection:** *Protective work clothing*

*
SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	*Powder*
Colour:	*White*
· **Odour:**	*typical, characteristic*
· **Odour threshold:**	*Not determined.*
· **pH-value at 20 °C:**	*9.8 (DIN 51369)* *9.5 (10g/l H2O) (DIN 51369)*
· **Change in condition**	
Melting point/freezing point:	*Undetermined.*
Initial boiling point and boiling range:	*Undetermined.*
· **Flash point:**	*Not applicable.*
· **Flammability (solid, gas):**	*Not determined.*
· **Decomposition temperature:**	*Not determined.*
· **Auto-ignition temperature:**	*Product is not selfigniting.*
· **Explosive properties:**	*Product does not present an explosion hazard.*
· **Explosion limits:**	
Lower:	*Not determined.*
Upper:	*Not determined.*
· **Vapour pressure:**	*Not applicable.*
· **Density at 20 °C:**	*0.8 g/cm³ (ASTM D 4052)*
· **Relative density**	*Not determined.*
· **Vapour density**	*Not applicable.*

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· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water:**	Soluble.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

*
SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
Anionic surfactant		
Oral	LD50	2,240 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)
	NOAEL	440 mg/kg/24h (mouse)
497-19-8 sodium carbonate		
Oral	LD50	2,800 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50 / 2h	2.3 mg/l (rat)
28348-53-0 sodium cumenesulphonate		
Oral	LD50	7,000 mg/kg (rat)
	NOAEL	114-3,534 mg/kg/24h (rat)
	LOAEL	4,092 mg/kg/24h (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
	NOAEL	2,000 mg/kg/24h (mouse)
		800-1,030 mg/kg/24h (rat)
Inhalative	LC50 / 4h	770 mg/l (rat)
6834-92-0 disodium metasilicate		
Oral	LD50	662-1,009 mg/kg (mouse)
		995-1,530 mg/kg (rat)
	NOAEL	260-284 mg/kg/24h (mouse)
		227-237 mg/kg/24h (rat)
	LOAEL	716-892 mg/kg/24h (mouse)
Dermal	LD50	5,000 mg/kg (rat)

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Inhalative	LC50 / 4h	2.06 mg/l (rat)

· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes skin irritation.
· ***Serious eye damage/irritation***
Causes serious eye damage.
· ***Respiratory or skin sensitisation*** Based on available data, the classification criteria are not met.
· ***Additional toxicological information:***
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***Germ cell mutagenicity*** Based on available data, the classification criteria are not met.
· ***Carcinogenicity*** Based on available data, the classification criteria are not met.
· ***Reproductive toxicity*** Based on available data, the classification criteria are not met.
· ***STOT-single exposure*** Based on available data, the classification criteria are not met.
· ***STOT-repeated exposure*** Based on available data, the classification criteria are not met.
· ***Aspiration hazard*** Based on available data, the classification criteria are not met.

*
SECTION 12: Ecological information

· ***12.1 Toxicity***

· ***Aquatic toxicity:***	
Anionic surfactant	
LC50	3.94 mg/l/96h (aquatic invertebrates)
LC0	4.1 mg/l/96h (fish)
LC100	7.5 mg/l/96h (fish)
LC50	1.67 mg/l/21d (aquatic invertebrates)
EC50	8.8 mg/l/24h (aquatic invertebrates)
EC10	5.6-8.4 mg/l/72h (algae / cyanobacteria)
EC50	25-72 mg/l/72h (algae / cyanobacteria)
EC50	1.5-2.31 mg/l/21d (aquatic invertebrates)
EC100	12.5 mg/l/48h (aquatic invertebrates)
EC0	6.3 mg/l/48h (aquatic invertebrates)
EC50	8.8 mg/l/48h (aquatic invertebrates)
NOEC	1.18 mg/l/21d (aquatic invertebrates)
NOEC	1.5 mg/l/72h (algae / cyanobacteria)
497-19-8 sodium carbonate	
LC50	300 mg/l/96h (fish)
EC50	200-227 mg/l/48h (aquatic invertebrates)
28348-53-0 sodium cumenesulphonate	
LC50	450-70,241 mg/l/96h (fish)
LC50	27,334 mg/l/48h (aquatic invertebrates)
LC50	0.8903 g/kg/14d (sediment)
	0.8903 g/kg/14d (terrestr. macroorganisms (- arthropods))
EC10	560 mg/l (fish)
	3,200 mg/l (microorganisms)
EC10	1,954 mg/kg (terrestrial plants)
	178.07 mg/kg (terrestr. macroorganisms (- arthropods))
EC50	230-10,603.5 mg/l/96h (algae / cyanobacteria)
EC50	1,000 mg/l/72h (algae / cyanobacteria)
EC50	154 mg/l/21d (aquatic invertebrates)

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EC50	450-1,000 mg/l/48h (aquatic invertebrates)
	16,000 mg/l/48h (microorganisms)
EC50	10,604 mg/kg (terrestrial plants)
	890.3 mg/kg (terrestr. macroorganisms (- arthropods))
NOEC	30 mg/l/21d (aquatic invertebrates)
NOEC	31 mg/l/96h (algae / cyanobacteria)
	560 mg/l/96h (fish)
6834-92-0 disodium metasilicate	
LC50	210-2,320 mg/l/96h (fish)
LC0	180 mg/l/96h (fish)
LC100	250 mg/l/96h (fish)
EC50	100 mg/l/72h (microorganisms)
EC100	10,000 mg/l/48h (aquatic invertebrates)
EC0	100 mg/l/48h (aquatic invertebrates)
EC50	1,700 mg/l/48h (aquatic invertebrates)

· ***12.2 Persistence and degradability*** *No further relevant information available.*

· ***12.3 Bioaccumulative potential***	
Anionic surfactant	
Partition coefficient	0.7 [---] (log Kow) (Bioaccumulation)
Biodegradability	94 % (28d) (Biodegradability) (EU Method C.4-A)
28348-53-0 sodium cumenesulphonate	
Bioconcentration factor (BCF)	3.16 BCF (Bioaccumulation)

· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (according to Appendix 1 AwSV): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*
· ***12.6 Other adverse effects*** *No further relevant information available.*

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.

· ***Uncleaned packaging:***
· ***Recommendation:*** *Disposal must be made according to official regulations.*
· ***Recommended cleansing agents:*** *Water, if necessary together with cleansing agents.*

SECTION 14: Transport information

· ***14.1 UN-Number***
· ***ADR/RID/ADN, ADN, IMDG, IATA*** *Void*

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· **14.2 UN proper shipping name** · **ADR/RID/ADN, ADN, IMDG, IATA**	*Void*
· **14.3 Transport hazard class(es)** · **ADR/RID/ADN, ADN, IMDG, IATA** · **Class**	*Void*
· **14.4 Packing group** · **ADR/RID/ADN, IMDG, IATA**	*Void*
· **14.5 Environmental hazards:**	*Not applicable.*
· **14.6 Special precautions for user**	*Not applicable.*
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	*Not applicable.*
· **UN "Model Regulation":**	*Void*

*
SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*

· **15.2 Chemical safety assessment:** *A Chemical Safety Assessment has been carried out.*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008.
No special training instructions to ensure protection of human health and environment are required.

· **purity requirement**
· **Relevant phrases**
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

· **Department issuing SDS:** *Abteilung Produktsicherheit*
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· **** Data compared to the previous version altered.***

Annex: Exposure scenario 1

· ***Short title of the exposure scenario*** *Industrial use of cleaning agents*
· ***Sector of Use***
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· ***Product category*** *PC35 Washing and cleaning products (including solvent based products)*
· ***Process category***
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***Conditions of use***
· ***Duration and frequency*** *5 workdays/week.*
· ***Physical parameters***
· ***Physical state*** *Fluid*
· ***Concentration of the substance in the mixture*** *The substance is main component.*
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** *No special measures required.*
· ***Other operational conditions affecting consumer exposure*** *Not required.*
· ***Other operational conditions affecting consumer exposure during the use of the product***
Not applicable.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures*** *No special measures required.*
· ***Technical protective measures*** *No special measures required.*
· ***Personal protective measures*** *No special measures required.*
· ***Measures for consumer protection*** *No special measures required.*
· ***Environmental protection measures***
· ***Air*** *No special measures required.*
· ***Water*** *No special measures required.*
· ***Disposal measures*** *Ensure that waste is collected and contained.*
· ***Disposal procedures*** *Dispose of product residues with household waste.*
· ***Waste type*** *Partially emptied and uncleaned packaging*
· ***Exposure estimation***
· ***Consumer*** *Not relevant for this Exposure Scenario.*
· ***Guidance for downstream users*** *No further relevant information available.*

Annex: Exposure scenario 2

· ***Short title of the exposure scenario*** *Professional use of cleaning agents*
· ***Sector of Use***
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

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· ***Product category*** *PC35 Washing and cleaning products (including solvent based products)*
· ***Process category***
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***Conditions of use***
· ***Duration and frequency*** *5 workdays/week.*
· ***Physical parameters***
· ***Physical state*** *Fluid*
· ***Concentration of the substance in the mixture*** *The substance is main component.*
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** *No special measures required.*
· ***Other operational conditions affecting consumer exposure*** *Not required.*
· ***Other operational conditions affecting consumer exposure during the use of the product***
Not applicable.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures*** *No special measures required.*
· ***Technical protective measures*** *No special measures required.*
· ***Personal protective measures*** *No special measures required.*
· ***Measures for consumer protection*** *No special measures required.*
· ***Environmental protection measures***
· ***Air*** *No special measures required.*
· ***Water*** *No special measures required.*
· ***Disposal measures*** *Ensure that waste is collected and contained.*
· ***Disposal procedures*** *Dispose of product residues with household waste.*
· ***Waste type*** *Partially emptied and uncleaned packaging*
· ***Exposure estimation***
· ***Consumer*** *Not relevant for this Exposure Scenario.*
· ***Guidance for downstream users*** *No further relevant information available.*

Annex: Exposure scenario 3

· ***Short title of the exposure scenario*** *Private use of cleaning agents*
· ***Sector of Use*** *SU21 Consumer uses: Private households / general public / consumers*
· ***Product category*** *PC35 Washing and cleaning products (including solvent based products)*
· ***Process category***
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring

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· ***Environmental release category***
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***Conditions of use***
· ***Duration and frequency*** *5 workdays/week.*
· ***Physical parameters***
· ***Physical state*** *Fluid*
· ***Concentration of the substance in the mixture*** *The substance is main component.*
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** *No special measures required.*
· ***Other operational conditions affecting consumer exposure*** *Not required.*
· ***Other operational conditions affecting consumer exposure during the use of the product***
Not applicable.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures*** *No special measures required.*
· ***Technical protective measures*** *No special measures required.*
· ***Personal protective measures*** *No special measures required.*
· ***Measures for consumer protection*** *No special measures required.*
· ***Environmental protection measures***
· ***Air*** *No special measures required.*
· ***Water*** *No special measures required.*
· ***Disposal measures*** *Ensure that waste is collected and contained.*
· ***Disposal procedures*** *Dispose of product residues with household waste.*
· ***Waste type*** *Partially emptied and uncleaned packaging*
· ***Exposure estimation***
· ***Consumer*** *Not relevant for this Exposure Scenario.*
· ***Guidance for downstream users*** *No further relevant information available.*