Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 09.05.2023 *Version number 3.2 (replaces version 3.1)* *Revision: 09.05.2023*

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

· **1.1 Product identifier**

· **Trade name: SPRAY WITH PTFE**

· **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.
dry lubricant

· **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.
Eye Dam. 1	H318	Causes serious eye damage.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 3	H412	Harmful 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 GHS05

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Hydrocarbons C6-C7, n-alkanes, iso-alkanes, cyclenes, <5% n-hexane
tetra-n-butoxytitanium
· **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful 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.
P280	Wear eye protection / face protection.
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).
P362+P364	Take off contaminated clothing and wash it before reuse.
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.

· **Additional information:**
Contains biocidal products: propan-2-ol
· **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: 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	50-70%
EC number: 921-024-6 Reg.nr.: 01-2119475514-35	Hydrocarbons C6-C7, n-alkanes, iso-alkanes, cyclenes, <5% n-hexane Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥10-<20%
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	10-25%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 Reg.nr.: 01-2119457558-25	propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	≥10-<20%
CAS: 5593-70-4 EINECS: 227-006-8	tetra-n-butoxytitanium Flam. Liq. 3, H226; Eye Dam. 1, H318; Skin Irrit. 2, H315; STOT SE 3, H335	≥3-≤7.5%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg.nr.: 01-2119485395-27	isobutane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-2.5%
CAS: 110-54-3 EINECS: 203-777-6 Index number: 601-037-00-0	n-hexane Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336 Specific concentration limit: STOT RE 2; H373: C ≥ 5%	0.25-1%

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CAS: 110-82-7 EINECS: 203-806-2 Index number: 601-017-00-1	cyclohexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	≥0.1-<0.25%

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

aliphatic hydrocarbons	≥15 - <30%

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

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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:**
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:**
Use neutralising agent.
Dispose contaminated material as waste according to section 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** No special precautions are necessary if used correctly.

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· ***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:***
The recommended storage temperature is (deg.C): -10 - +50°C
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)
67-63-0 propan-2-ol	
WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm
110-54-3 n-hexane	
WEL	Long-term value: 72 mg/m³, 20 ppm
110-82-7 cyclohexane	
WEL	Short-term value: 1050 mg/m³, 300 ppm Long-term value: 350 mg/m³, 100 ppm

· **DNELs**		
Hydrocarbons C6-C7, n-alkanes, iso-alkanes, cyclenes, <5% n-hexane		
Oral	DNEL/general population/Systemic effects/Long-term	699 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Systemic effects / Long-term	773 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	699 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	2,035 mg/m3 (worker)
	DNEL/general population/Systemic effects/Long-term	608 mg/m3 (consumer)
67-63-0 propan-2-ol		
Oral	DNEL/general population/Systemic effects/Long-term	26 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Systemic effects / Long-term	888 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	319 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	500 mg/m3 (worker)
	DNEL/general population/Systemic effects/Long-term	89 mg/m3 (consumer)
5593-70-4 tetra-n-butoxytitanium		
Oral	DNEL/general population/Systemic effects/Long-term	3.75 mg/kg/24h (consumer)
Dermal	DNEL/general population/Systemic effects/Long-term	37.5 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	127 mg/m3 (worker)
	DNEL/general population/Systemic effects/Long-term	152 mg/m3 (consumer)

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110-82-7 cyclohexane		
Oral	DNEL/general population/Systemic effects/Long-term	59.4 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Systemic effects / Long-term	2,016 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	1,186 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	700 mg/m3 (worker)
	DNEL/Workers/Systemic effects/acute-short term	700 mg/m3 (worker)
	DNEL/Workers/Local effects/acute-short term	700 mg/m3 (worker)
	DNEL / Workers / Local Effects / Long-term	700 mg/m3 (worker)
	DNEL/general population/Systemic effects/Long-term	206 mg/m3 (consumer)
	DNEL/general pop/Systemic effects/acute-short term	412 mg/m3 (consumer)
	DNEL/general pop/Local effects/acute-short term	412 mg/m3 (consumer)
	DNEL/general population/Local effects/Long-term	206 mg/m3 (consumer)

· **PNECs**

67-63-0 propan-2-ol		
Oral	PNEC / Predators / Secondary poisoning	160 mg/kg food (secondary poisoning (predators))
	PNEC / Aquatic organisms / Freshwater	140.9 mg/l (aquatic organisms)
	PNEC / Aquatic organisms / Marine water	140.9 mg/l (aquatic organisms)
	PNEC/Aquatic org/intermittent releases(freshwater)	140.9 mg/l (aquatic organisms)
	PNEC/Aquatic organisms/Sewage treatment plant/STP	2,251 mg/l (aquatic organisms)
	PNEC / Aquatic organisms / Sediment (freshwater)	552 mg/kg (aquatic organisms)
	PNEC / Aquatic organisms / Sediment (marine water)	552 mg/kg (aquatic organisms)
	PNEC / Terrestrial organism / Soil	28 mg/kg (terrestrial organisms)

5593-70-4 tetra-n-butoxytitanium		
	PNEC / Aquatic organisms / Freshwater	0.08 mg/l (aquatic organisms)
	PNEC / Aquatic organisms / Marine water	0.008 mg/l (aquatic organisms)
	PNEC/Aquatic org/intermittent releases(freshwater)	2.25 mg/l (aquatic organisms)
	PNEC/Aquatic organisms/Sewage treatment plant/STP	65 mg/l (aquatic organisms)
	PNEC / Aquatic organisms / Sediment (freshwater)	0.0687 mg/kg (aquatic organisms)
	PNEC / Aquatic organisms / Sediment (marine water)	0.0069 mg/kg (aquatic organisms)

110-82-7 cyclohexane		
	PNEC / Aquatic organisms / Freshwater	0.207 mg/l (aquatic organisms)
	PNEC / Aquatic organisms / Marine water	0.207 mg/l (aquatic organisms)
	PNEC/Aquatic organisms/Sewage treatment plant/STP	3.24 mg/l (aquatic organisms)
	PNEC / Aquatic organisms / Sediment (freshwater)	3.627 mg/kg (aquatic organisms)
	PNEC / Aquatic organisms / Sediment (marine water)	3.627 mg/kg (aquatic organisms)
	PNEC / Terrestrial organism / Soil	2.99 mg/kg (terrestrial organisms)

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

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· **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:**
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**
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**

safety goggles

· **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:**	Yellowish
· **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:**	<-30 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Consistency**	
· **Dynamic:**	Not determined.

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· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Heat Capacity**	
· **Vapour pressure:**	Not determined.
· **Vapour pressure:**	
· **Density and/or relative density**	
· **Density at 20 °C:**	0.608 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.**	
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Solvent separation test:**	
· **VOC (EC)**	97.52 %
· **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
· **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.

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· **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** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
Dermal	LD50	>2,000 mg/kg (rat)

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-C7, n-alkanes, iso-alkanes, cyclenes, <5% n-hexane		
Oral	LD50	8 ml/kg (rat)
Dermal	LD50	4 ml/kg (rat)
	LD50	2,800-3,100 mg/kg (rat)
Inhalative	LC50 / 4h	25.2 mg/l (rat)
	NOAEC	8.117-24.3 mg/l (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)
	NOAEC	7.214-21.394 mg/l (rat)
	LOAEC	21.64 mg/l (rat)
	LOAEC	12,000 ppm (rat)
67-63-0 propan-2-ol		
Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	16.4 ml/kg (rabbit)
	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50 / 6h	10,000 ppm (rat)
	NOAEC	5,000 ppm (rat)
	NOEC	500-5,000 ppm (rat)
5593-70-4 tetra-n-butoxytitanium		
Oral	LD50	2,000 mg/kg (rat)
	NOAEL	125 mg/kg/24h (rat)
Inhalative	NOAEL	2.35 mg/l (rat)
75-28-5 isobutane		
Inhalative	LC50 / 15 min	1,442.738-1.443 mg/l (rat)

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	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)
	NOAEC	7.214-21.394 mg/l (rat)
	LOAEC	21.641 mg/l (rat)
	LOAEC	12,000 ppm (rat)
110-82-7 cyclohexane		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50 / 4h	32.88 mg/l (rat)
	LC50 / 4h	5,540 ppm (rat)
	NOAEC	500-2,000 ppm (mouse)
		500-7,000 ppm (rat)

· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye damage.
· **Aspiration hazard** May be fatal if swallowed and enters airways.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

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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-C7, n-alkanes, iso-alkanes, cyclenes, <5% n-hexane	
EC50	0.23 mg/l/21d (aquatic invertebrates)
EC50	0.64 mg/l/48h (aquatic invertebrates)
LL50	11.4 mg/l/96h (fish)
LL50	15.8 mg/l/72h (fish)
LL0	5.1 mg/l/96h (fish)
EL50	3 mg/l/48h (aquatic invertebrates)
EL50	12 mg/l/24h (aquatic invertebrates)
EL50	10-100 mg/l/72h (algae / cyanobacteria)
EL0	2 mg/l/48h (aquatic invertebrates)
EL0	10 mg/l/24h (aquatic invertebrates)
NOEC	0.17 mg/l/21d (aquatic invertebrates)
NOELR	2.045 mg/l/28d (fish)
NOELR	1 mg/l/21d (aquatic invertebrates)
LOEC	0.32 mg/kg/28d (aquatic invertebrates)
74-98-6 propane	
LC50	24.11-147.54 mg/l/96h (fish)
LC50	14.22-69.43 mg/l/48h (aquatic invertebrates)

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EC50	7.71-19.37 mg/l/96h (algae / cyanobacteria)
67-63-0 propan-2-ol	
LC50	9.64-10 mg/l/96h (fish)
LC50	10,000 mg/l/24h (aquatic invertebrates)
EC50	10,000 mg/l/24h (aquatic invertebrates)
5593-70-4 tetra-n-butoxytitanium	
LC50	1,740-2,300 mg/l/96h (fish)
EC50	770-2,237 mg/l/24h (aquatic invertebrates)
EC50	225 mg/l/96h (algae / cyanobacteria)
EC50	400-960 mg/l/72h (algae / cyanobacteria)
EC100	2,700 mg/l/48h (aquatic invertebrates)
EC50	590-1,983 mg/l/48h (aquatic invertebrates)
NOEC	4-20 mg/l/21d (aquatic invertebrates)
75-28-5 isobutane	
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)
110-82-7 cyclohexane	
LC50	4.53 mg/l/96h (fish)
EC50	0.9-2.4 mg/l/96h (aquatic invertebrates)
EC50	3.4-9.317 mg/l/72h (algae / cyanobacteria)
NOEC	0.9-0.94 mg/l/72h (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-C7, n-alkanes, iso-alkanes, cyclenes, <5% n-hexane	
Biodegradability	81 % (28d) (Biodegradability) (OECD 301 F)
74-98-6 propane	
Partition coefficient	1.09-2.8 [---] (log Kow) (Bioaccumulation)
67-63-0 propan-2-ol	
Partition coefficient	0.05 [---] (log Kow) (Bioaccumulation)
Biodegradability	>70 % (28d) (Biodegradability) (EU Method C.5)
5593-70-4 tetra-n-butoxytitanium	
Partition coefficient	0.84-0.88 [---] (log Kow) (Bioaccumulation)
Biodegradability	>82 % (28d) (Biodegradability) (EU Method C.5)
75-28-5 isobutane	
Partition coefficient	1.09-2.8 [---] (log Kow) (Bioaccumulation)
Biodegradability	100 % (28d) (Biodegradability)
110-82-7 cyclohexane	
Partition coefficient	3.44 [---] (log Kow) (Bioaccumulation)
Biodegradability	77 % (28d) (Biodegradability) (OECD 301 F)

· **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**
The product does not contain substances with endocrine disrupting properties.

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· **12.7 Other adverse effects**
· **Remark:** Harmful to fish
· **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.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms

*
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.

*
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
· **IMDG**	AEROSOLS
· **IATA**	AEROSOLS, flammable
· **14.3 Transport hazard class(es)**	
· **ADR/RID/ADN**	

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

· **Class**	2.1 Gases.
· **Label**	2.1
· **14.4 Packing group**	
· **ADR/RID/ADN, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.

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· **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

*
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
· **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.

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· ***purity requirement***
· ***Relevant phrases***
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 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.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
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)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (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
Flam. Liq. 3: Flammable liquids – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
· **** Data compared to the previous version altered.***

Annex: Exposure scenario 1

· ***Short title of the exposure scenario*** *Industrial use of lubricants and greases in open systems*
· ***Sector of Use***
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· ***Product category*** *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.

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PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC7 Industrial spraying
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)
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring
· ***Environmental release category***
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
· ***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 2

· ***Short title of the exposure scenario*** *Professional use of lubricants and greases in open systems*
· ***Sector of Use***
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· ***Product category*** *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
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)
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**
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 3

· **Short title of the exposure scenario** Private use of lubricants and greases in open systems
· **Sector of Use** SU21 Consumer uses: Private households / general public / consumers
· **Product category** PC24 Lubricants, greases, release products
· **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.

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· **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 4

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

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Annex: Exposure scenario 5

· **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.
· **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 6

· **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.

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· ***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.*