Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Version number: GHS 14.0
Replaces version of: 2023-09-06 (GHS 13)

Revision: 2023-11-13

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

1.1 Product identifier

Trade name **PROMAT CHEMICALS ALUMINIUM-SPRAY - 400 ml**

Unique formula identifier (UFI) SP50-K0CT-100F-GG6R

Article number 4000 354075

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

Relevant identified uses General use
Paint, coating and lacquer

1.3 Details of the supplier of the safety data sheet

NORDWEST Handel AG
Robert-Schuman-Straße 17
44263 Dortmund
Germany

Telephone: +49 (0)231 2222-3001
Telefax: +49 (0)231 2222-3099
e-mail: sdb@nordwest.com
Website: www.nordwest.com

e-mail (competent person) sdb@nordwest.com

1.4 Emergency telephone number

Austria:	Vergiftungsinformationszentrale (VIZ)	+43 (0)1 406 43 43
Germany:	Gemeinsamen Giftinformationszentrum (GGIZ) der Laender Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thueringen c/o HELIOS Klinikum Erfurt	+49-361-730730
Switzerland:	Tox Info Suisse	+145, 24h oder +41 44 251 51 51

Poison centre

Country	Name	Postal code/city	Telephone
Austria	Vergiftungsinformationszentrale (VIZ)		**+43 (0)1 406 43 43**
Germany	Gemeinsamen Giftinformationszentrum (GGIZ) der Laender Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thueringen c/o HELIOS Klinikum Erfurt	99089 Erfurt	**+49-361-730730**
Switzerland	Tox Info Suisse		**+145, 24h oder +41 44 251 51 51**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.3	aerosols	1	Aerosol 1	H222,H229
2.12	substance and mixture which, in contact with water, emits flammable gas	2	Water-react. 2	H261
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

In contact with water releases flammable gases which may ignite spontaneously. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word danger

Pictograms

GHS02, GHS07

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H261	In contact with water releases flammable gases.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
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.
P231+P232	Handle and store contents under inert gas. Protect from moisture.
P251	Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P302+P335+P334	IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
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.

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

Hazardous ingredients for labelling ethyl acetate, acetone, Hydrocarbons, C9, aromatics

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Identifier	Name of substance	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits
CAS No 106-97-8 EC No 203-448-7 Index No 601-004-01-8	butane	25 – < 50	Flam. Gas 1B / H221 Press. Gas C / H280		C GHS-HC U(b)	
CAS No 74-98-6 EC No 200-827-9 Index No 601-003-00-5 REACH Reg. No 01-2119486944-21	propane	10 – < 25	Flam. Gas 1A / H220 Press. Gas L / H280		GHS-HC U(c)	
CAS No 141-78-6 EC No 205-500-4 Index No 607-022-00-5 REACH Reg. No 01-2119475103-46-xxxx	ethyl acetate	10 – < 25	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		GHS-HC IOELV	

Identifier	Name of substance	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits
CAS No 67-64-1 EC No 200-662-2 Index No 606-001-00-8 REACH Reg. No 01-2119471330-49	acetone	10 – < 25	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		GHS-HC IOELV	
CAS No 1330-20-7 EC No 215-535-7 Index No 601-022-00-9 REACH Reg. No 01-2119488216-32-xxxx	xylene	1 – < 5	Flam. Liq. 3 / H226 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Asp. Tox. 1 / H304		C GHS-HC IOELV	
CAS No 64742-95-6 EC No 265-199-0 Index No 649-356-00-4 REACH Reg. No 01-2119455851-35-xxxx	Hydrocarbons, C9, aromatics	1 – < 5	Flam. Liq. 3 / H226 STOT SE 3 / H335 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411		P(b)	
CAS No 7429-90-5 EC No 231-072-3 Index No 013-001-00-6 REACH Reg. No 01-2119529243-45-xxxx	Aluminium powder (Stabilized)	1 – < 5	Flam. Sol. 1 / H228 Water-react. 2 / H261		GHS-HC T	
CAS No 7440-66-6 EC No 231-175-3 Index No 030-001-00-1 REACH Reg. No 01-2119467174-37-xxxx	zinc	1 – < 5	Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		GHS-HC	
EC No 918-481-9 REACH Reg. No 01-2119457273-39-xxxx	Kohlenwasserstoffe, C10-C13, n-Alkane, Isoalkane, Cycloalkane, <2% Aromaten	1 – < 5	Asp. Tox. 1 / H304			
CAS No 64742-48-9 EC No 265-150-3 Index No 649-327-00-6 REACH Reg. No 01-2119457273-39	Naphtha (petroleum), hydrotreated heavy	1 – < 5	Asp. Tox. 1 / H304			

Notes

C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Notes

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)
IOELV: Substance with a community indicative occupational exposure limit value
P(b): The classification as a carcinogen or mutagen is not required. The substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262- P301 + P310-P331 shall apply
T: This substance may be marketed in a form which does not have the physical hazards as indicated by The classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed does not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method(s) shall be included in the safety data sheet.
U(b): The allocation to the group 'compressed gas' is based on the physical state in which the gas is packaged
U(c): The allocation to the group 'liquefied gas' is based on the physical state in which the gas is packaged

Hazardous ingredients, Specific Conc. Limits, M-factors, ATE

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
xylene	-	-	1,100 $^{mg}/_{kg}$ 11 $^{mg}/_{l}$/4h	dermal inhalation: vapour

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

D-Powder, Dry sand

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Product may release hydrogen gas. Increased storage temperatures will accelerate this process. Water-reactive (in contact with water releases flammable gases).

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

Flammability hazards

Do not spray on an open flame or other ignition source. Protect from sunlight.

Incompatible substances or mixtures

Do not allow contact with water.

Evaporative conditions

Keep container tightly closed and in a well-ventilated place.

Packaging compatibilities

Keep only in original container.

Storage class (LGK) TRGS 510

LGK 2 B (aerosol dispensers and lighters)

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
DE	butane	106-97-8	AGW	1,000	2,400	4,000	9,600				TRGS 900
DE	xylene, mixture of isomers	1330-20-7	MAK	50	220	100	440			H	DFG
DE	xylene, mixture of isomers	1330-20-7	AGW	50	220	100	440			H	TRGS 900
DE	ethyl acetate	141-78-6	MAK	200	750	400	1,500				DFG
DE	ethyl acetate	141-78-6	AGW	200	730	400	1,460			Y	TRGS 900

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
DE	Naphtha (petroleum), hydrotreated heavy	64742-48-9	MAK	50	300	100	600				DFG
DE	acetone	67-64-1	AGW	500	1,200	1,000	2,400			Y	TRGS 900
DE	propane	74-98-6	AGW	1,000	1,800	4,000	7,200				TRGS 900
DE	aluminium	7429-90-5	MAK		4					dust, i	DFG
DE	aluminium	7429-90-5	MAK		1.5					r	DFG
DE	zinc	7440-66-6	MAK		2		4			i	DFG
DE	zinc	7440-66-6	MAK		0.1		0.4			r	DFG
EU	xylene	1330-20-7	IOELV	50	221	100	442			H	2000/39/EC
EU	ethyl acetate	141-78-6	IOELV	200	734	400	1,468				2017/164/EU
EU	acetone	67-64-1	IOELV	500	1,210						2000/39/EC

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
H	absorbed through the skin
i	inhalable fraction
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)
Y	a risk of developmental toxicity does not need to be expected if the occupational exposure limit value and the biological limit value (BGW) are adhered to

Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
DE	xylene, mixture of isomers	methylhippuric acids		BAT	2,000 mg/l	DFG
DE	xylene, mixture of isomers	methylhippuric acids		BLV	2,000 mg/l	TRGS 903
DE	Aceton	Aceton		BAT	50 mg/l	DFG
DE	Aceton	Aceton		BAT (BAR)	2.5 mg/l	DFG
DE	acetone	acetone		BLV	80 mg/l	TRGS 903
DE	aluminium	aluminium	crea	BAT	50 µg/g	DFG
DE	aluminium	aluminium	crea	BAT (BAR)	15 µg/g	DFG
DE	aluminium	aluminium	crea	BLV	50 µg/l	TRGS 903

Notation

crea	creatinine

Relevant DNELs of components

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
ethyl acetate	141-78-6	DNEL	1,468 mg/m³	human, inhalatory	worker (industry)	acute - local effects
ethyl acetate	141-78-6	DNEL	1,468 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects

Relevant DNELs of components

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
ethyl acetate	141-78-6	DNEL	734 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
ethyl acetate	141-78-6	DNEL	63 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
ethyl acetate	141-78-6	DNEL	734 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
acetone	67-64-1	DNEL	2,420 mg/m³	human, inhalatory	worker (industry)	acute - local effects
acetone	67-64-1	DNEL	186 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
acetone	67-64-1	DNEL	1,210 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
xylene	1330-20-7	DNEL	221 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
xylene	1330-20-7	DNEL	442 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
xylene	1330-20-7	DNEL	221 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
xylene	1330-20-7	DNEL	442 mg/m³	human, inhalatory	worker (industry)	acute - local effects
xylene	1330-20-7	DNEL	212 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hydrocarbons, C9, aromatics	64742-95-6	DNEL	25 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Hydrocarbons, C9, aromatics	64742-95-6	DNEL	150 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
zinc	7440-66-6	DNEL	83 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
zinc	7440-66-6	DNEL	5 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
ethyl acetate	141-78-6	PNEC	0.24 $^{mg}/_{l}$	aquatic organisms	freshwater	short-term (single instance)
ethyl acetate	141-78-6	PNEC	0.024 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)
ethyl acetate	141-78-6	PNEC	650 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
ethyl acetate	141-78-6	PNEC	1.15 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)
ethyl acetate	141-78-6	PNEC	0.115 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
ethyl acetate	141-78-6	PNEC	0.148 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)
ethyl acetate	141-78-6	PNEC	1.65 $^{mg}/_{l}$	aquatic organisms	water	intermittent release
acetone	67-64-1	PNEC	10.6 $^{mg}/_{l}$	aquatic organisms	freshwater	short-term (single instance)
acetone	67-64-1	PNEC	1.06 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)
acetone	67-64-1	PNEC	100 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
acetone	67-64-1	PNEC	30.4 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
acetone	67-64-1	PNEC	3.04 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
acetone	67-64-1	PNEC	29.5 mg/kg	terrestrial organisms	soil	short-term (single instance)
acetone	67-64-1	PNEC	21 mg/l	aquatic organisms	water	intermittent release
xylene	1330-20-7	PNEC	0.327 mg/l	aquatic organisms	water	intermittent release
xylene	1330-20-7	PNEC	0.327 mg/l	aquatic organisms	freshwater	short-term (single instance)
xylene	1330-20-7	PNEC	0.327 mg/l	aquatic organisms	marine water	short-term (single instance)
xylene	1330-20-7	PNEC	6.58 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
xylene	1330-20-7	PNEC	12.46 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
xylene	1330-20-7	PNEC	12.46 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
xylene	1330-20-7	PNEC	2.31 mg/kg	terrestrial organisms	soil	short-term (single instance)
zinc	7440-66-6	PNEC	20.6 µg/l	aquatic organisms	freshwater	short-term (single instance)
zinc	7440-66-6	PNEC	6.1 µg/l	aquatic organisms	marine water	short-term (single instance)
zinc	7440-66-6	PNEC	100 µg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
zinc	7440-66-6	PNEC	117.8 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
zinc	7440-66-6	PNEC	56.5 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
zinc	7440-66-6	PNEC	35.6 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Personal protective equipment shall be used when the risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

Eye/face protection

Use protective eyewear to guard against splash of liquids.

Skin protection

Hand protection

Wear protective gloves. (Splash protection)

Type of material

NR: natural rubber, latex, FKM: fluoro-elastomer

Breakthrough times of the glove material

>480 minutes (permeation: level 6)

Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Full face mask/half mask/quarter mask (EN 136/140).
Type: AX-P2 (gas filters and combined filters against low-boiling point organic compounds and particles, colour code: Brown/White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	aerosol (spray aerosol)
Colour	silver grey
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	-161.5 °C at 1,013 hPa
Flammability	flammable aerosol in accordance with GHS criteria mixture which, in contact with water, emits flammable gases (in accordance with GHS criteria)
Lower and upper explosion limit	0.6 vol% - 15 vol%
Flash point	-87 °C at 1,013 hPa
Auto-ignition temperature	>200 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not relevant
Solubility(ies)	not determined
Partition coefficient	
Partition coefficient n-octanol/water (log value)	this information is not available
Vapour pressure	4,200 hPa at 20 °C
Density and/or relative density	
Density	0.7202 $^{g}/_{ml}$ (calculated value)
Relative vapour density	information on this property is not available

9.2 Other information

Information with regard to physical hazard classes	there is no additional information
Other safety characteristics	
Temperature class (EU, acc. to ATEX)	T3 (maximum permissible surface temperature on the equipment: 200°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition. Reactivity with water.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Material reacts vigorously with water emitting flammable gases.

10.4 Conditions to avoid

Do not spray on an open flame or other ignition source. Keep away from heat.

Hints to prevent fire or explosion

Protect from sunlight.

10.5 Incompatible materials

Water, Oxidisers

Release of flammable materials with:

Water

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

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

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
xylene	1330-20-7	dermal	1,100 $^{mg}/_{kg}$
xylene	1330-20-7	inhalation: vapour	11 $^{mg}/_{l}$/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Other information

Repeated exposure may cause skin dryness or cracking.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Acc. to 1272/2008/EC: Harmful to aquatic life with long lasting effects.
Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV): WGK 2, obviously hazardous to water (Germany)

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
ethyl acetate	141-78-6	EC50	2,306 $^{mg}/_{l}$	aquatic invertebrates	24 h
acetone	67-64-1	EC50	61.15 $^{g}/_{l}$	microorganisms	30 min
xylene	1330-20-7	EL50	2.9 $^{mg}/_{l}$	aquatic invertebrates	21 d
xylene	1330-20-7	ErC50	4.36 $^{mg}/_{l}$	algae	73 h
xylene	1330-20-7	EC50	2.2 $^{mg}/_{l}$	algae	73 h
Hydrocarbons, C9, aromatics	64742-95-6	EC50	>99 $^{mg}/_{l}$	microorganisms	10 min

12.2 Persistence and degradability

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
ethyl acetate	141-78-6	oxygen depletion	62 %	5 d		
acetone	67-64-1	carbon dioxide generation	90.9 %	28 d		
xylene	1330-20-7	oxygen depletion	98 %	28 d		ECHA
Hydrocarbons, C9, aromatics	64742-95-6	oxygen depletion	30.9 %	2 d		ECHA
Naphtha (petroleum), hydrotreated heavy	64742-48-9	oxygen depletion	10 %	5 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
butane	106-97-8		1.09 (pH value: 7, 20 °C)	
propane	74-98-6		1.09 (pH value: 7, 20 °C)	
ethyl acetate	141-78-6	30	0.68 (pH value: 7, 25 °C)	
acetone	67-64-1		-0.24	
xylene	1330-20-7	>5.5 – <12.2	3.2 (pH value: 7, 20 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

List of wastes, (Recommendations)

Product

08 01 11* Waste paint and varnish containing organic solvents or other hazardous substances

Product residues

16 05 04* Gases in pressure containers (including halons) containing hazardous substances

Packagings

15 01 04 Metallic packaging

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	UN 1950
IMDG-Code	UN 1950
ICAO-TI	UN 1950

14.2 UN proper shipping name

ADR/RID/ADN	AEROSOLS
IMDG-Code	AEROSOLS
ICAO-TI	Aerosols, flammable

14.3 Transport hazard class(es)

ADR/RID/ADN	2 (2.1)
IMDG-Code	2.1
ICAO-TI	2.1

14.4 Packing group not assigned

14.5 Environmental hazards non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) Additional information

Classification code	5F
Danger label(s)	2.1

Special provisions (SP)	190, 327, 344, 625
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	D

International Maritime Dangerous Goods Code (IMDG) Additional information

Marine pollutant	-
Danger label(s)	2.1

Special provisions (SP)	63, 190, 277, 327, 344, 381, 959
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
EmS	F-D, S-U
Stowage category	-

International Civil Aviation Organization (ICAO-IATA/DGR) Additional information

Danger label(s)	2.1

Special provisions (SP)	A145, A167
Excepted quantities (EQ)	E0
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

none of the ingredients are listed

Deco-Paint Directive (2004/42/EC)

VOC content	653.8 $^{g}/_{l}$

Maximum VOC content limit

Product category	Product subcategory	Coating	Type	VOC g/l
vehicle refinishing products	special finishes	all types		840

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Pollutant release and transfer registers (PRTR)

Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)
xylene	1330-20-7	(17) (11)	
zinc	7440-66-6	(8)	200

Legend
(11) Single pollutants are to be reported if the threshold for BTEX (the sum parameter of benzene, toluene, ethyl benzene, xylenes) is exceeded
(17) Total mass of xylene (ortho-xylene, meta-xylene, para-xylene)
(8) All metals shall be reported as the total mass of the element in all chemical forms present in the release

Water Framework Directive (WFD)

List of pollutants (WFD)

Name of substance	CAS No	Listed in	Remarks
zinc		a)	
Aluminium powder (Stabilized)		a)	
Naphtha (petroleum), hydrotreated heavy		a)	

Legend
a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

This product is regulated by Regulation (EU) No 2019/1148: All suspicious transactions as well as the loss and theft of significant quantities must be reported to the competent authority.

Explosives precursors which are subject to restrictions

Name of substance	CAS No	Type of registration	Remarks	Limit value	Upper limit value for the purpose of licensing under Article 5(3)
acetone	67-64-1	Annex II			
Aluminium powder (Stabilized)	7429-90-5	Annex II	powd d < 200 µm > 70%		

Legend
> 70% As a substance or in mixtures containing 70 % or more, by weight, of aluminium and/or magnesium.
Annex II Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported
d < 200 µm With a particle size less than 200 µm.
powd Powder

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK (water hazard class) 2 obviously hazardous to water

Technical instructions on air quality control (Germany)

Number	Group of substances	Class	Conc.	Mass flow	Mass concentration	Notation
5.2.5	organic substances		≥ 25 wt%	0.5 $^{kg}/_{h}$	50 $^{mg}/_{m^3}$	3)

Notation

3) a total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m³, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)

National inventories

Country	Inventory	Status
EU	REACH Reg.	not all ingredients are listed

Legend

REACH Reg. REACH registered substances

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Unique formula identifier (UFI): SP50-K0CT-100F-GG6R		yes
1.1		Unique formula identifier (UFI): SP50-K0CT-100F-GG6R	yes
1.2	Uses advised against: do not use for products which come into contact with foodstuffs		yes
1.3	Details of the supplier of the safety data sheet: NORDWEST Handel AG Robert-Schuman-Straße 17 44263 Dortmund Germany Telephone: +49 (0)231 2222-3001 Telefax: +49 (0)231 2222-3099 Website: www.nordwest.com	Details of the supplier of the safety data sheet: NORDWEST Handel AG Robert-Schuman-Straße 17 44263 Dortmund Germany Telephone: +49 (0)231 2222-3001 Telefax: +49 (0)231 2222-3099 e-mail: sdb@nordwest.com Website: www.nordwest.com	yes
1.3	e-Mail (competent person): sdb@nordwest.com		yes
1.3		e-mail (competent person): sdb@nordwest.com	yes
1.4		Emergency telephone number: change in the listing (table)	yes
1.4		Poison centre: change in the listing (table)	yes
2.1		Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table)	yes
2.1	Remarks: For full text of H-phrases: see SECTION 16.		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relev-ant
2.1	Supplemental hazard information		yes
2.1		Supplemental hazard information: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2	Additional labelling requirements		yes
2.3	Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.		yes
2.2		Precautionary statements: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) in a concentration of ≥ 0,1%.	yes
3.1		Substances: Not relevant (mixture)	yes
3.2		Hazardous ingredients acc. to EU regulation: change in the listing (table)	yes
3.2		Description of the mixture: change in the listing (table)	yes
3.2		Hazardous ingredients, Specific Conc. Limits, M-factors, ATE: change in the listing (table)	yes
4.1	Following skin contact: Wash with plenty of soap and water. Take off contaminated clothing.	Following skin contact: Wash with plenty of soap and water.	yes
4.1	Following ingestion: Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.	Following ingestion: Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.	yes
6.3	Advice on how to clean up a spill: Collect spillage (universal binder).		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
7.2	Incompatible substances or mixtures: Observe hints for combined storage. Do not allow contact with water.	Incompatible substances or mixtures: Do not allow contact with water.	yes
7.2	Consideration of other advice: Observe instructions for use. Keep out of reach of children.		yes
7.2	• Packaging compatibilities: Only packagings which are approved (e.g. acc. to ADR) may be used.	Packaging compatibilities: Keep only in original container.	yes
7.2		Storage class (LGK) TRGS 510: LGK 2 B (aerosol dispensers and lighters)	yes
8.1	National limit values		yes
8.1	Occupational exposure limit values (Workplace Exposure Limits)		yes
8.1	Biological limit values		yes
8.1	Relevant DNELs/DMELs/PNECs and other threshold levels		yes
8.1	• relevant DNELs of components of the mixture		yes
8.1	• relevant PNECs of components of the mixture		yes
8.2	Individual protection measures (personal protective equipment): eye protection must be worn safety gloves must be worn do not eat or drink	Individual protection measures (personal protective equipment): eye protection must be worn safety gloves must be worn do not eat or drinkPersonal protective equipment shall be used when the risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.	yes
8.2	Environmental exposure controls: Use appropriate container to avoid environmental contamination.	Environmental exposure controls: Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.	yes
9.1	Appearance		yes
9.1	Odour: characteristic		yes
9.1	Other physical and chemical parameters		yes
9.1		Odour: characteristic	yes
9.1	Melting point/freezing point: not applicable (aerosol)	Melting point/freezing point: not determined	yes
9.1	Initial boiling point and boiling range: not applicable (aerosol)	Boiling point or initial boiling point and boiling range: -161.5 °C at 1,013 hPa	yes
9.1	Explosive limits	Lower and upper explosion limit: 0.6 vol% - 15 vol%	yes
9.1	• lower explosion limit (LEL): 0.6 vol%		yes
9.1	• upper explosion limit (UEL): 15 vol%		yes
9.1	Flash point: not applicable (aerosol)	Flash point: -87 °C at 1,013 hPa	yes
9.1	Viscosity: not relevant (aerosol)		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
9.1	Explosive properties: none		yes
9.1	Oxidising properties: none		yes
9.1		Decomposition temperature: not relevant	yes
9.1		pH (value): not determined	yes
9.1		Kinematic viscosity: not relevant	yes
9.1		Density and/or relative density	yes
9.1		Relative vapour density: information on this property is not available	yes
9.2	Other information: There is no additional information.	Other information	yes
9.2		Information with regard to physical hazard classes: there is no additional information	yes
9.2		Other safety characteristics	yes
9.2		Temperature class (EU, acc. to ATEX): T3 (maximum permissible surface temperature on the equipment: 200°C)	yes
10.4	Physical stresses which might result in a hazardous situation and have to be avoided: high temperatures		yes
11.1	• Acute toxicity of components of the mixture		yes
11.1		• Acute toxicity of components of the mixture: change in the listing (table)	yes
11.1	Summary of evaluation of the CMR properties: Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.		yes
11.1	Specific target organ toxicity (STOT)		yes
11.1		Germ cell mutagenicity: Shall not be classified as germ cell mutagenic.	yes
11.1		Carcinogenicity: Shall not be classified as carcinogenic.	yes
11.1		Reproductive toxicity: Shall not be classified as a reproductive toxicant.	yes
11.2		Information on other hazards: There is no additional information.	yes
12.1	Toxicity: Harmful to aquatic life with long lasting effects. Wassergefährdungsklasse, WGK (water hazard class) (WGK; Germany): 2 (obviously hazardous to water)	Toxicity: Acc. to 1272/2008/EC: Harmful to aquatic life with long lasting effects. Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV): WGK 2, obviously hazardous to water (Germany)	yes
12.1	Aquatic toxicity (acute)		yes
12.1	Aquatic toxicity (acute) of components of the mixture		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relev-ant
12.1		Aquatic toxicity (acute) of components of the mixture: change in the listing (table)	yes
12.1	Aquatic toxicity (chronic): May cause long-term adverse effects in the aquatic environment.		yes
12.1	Aquatic toxicity (chronic) of components of the mixture		yes
12.2	Degradability of components of the mixture		yes
12.3	Bioaccumulative potential of components of the mixture		yes
12.2		Degradability of components: change in the listing (table)	yes
12.5	Results of PBT and vPvB assessment: Data are not available.	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.	yes
12.6	Endocrine disrupting potential: None of the ingredients are listed.	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) in a concentration of ≥ 0,1%.	yes
13.1	List of wastes: 16 05 04* gases in pressure containers (including halons) containing hazardous substances 15 01 10* packaging containing residues of or contaminated by hazardous substances	List of wastes, (Recommendations)	yes
13.1		Product: 08 01 11* Waste paint and varnish containing organic solvents or other hazardous substances	yes
13.1		Product residues: 16 05 04* Gases in pressure containers (including halons) containing hazardous substances	yes
13.1		Packagings: 15 01 04 Metallic packaging	yes
14.1	UN number: 1950	UN number or ID number	yes
14.1		ADR/RID/ADN: UN 1950	yes
14.1		IMDG-Code: UN 1950	yes
14.1		ICAO-TI: UN 1950	yes
14.2	UN proper shipping name: AEROSOLS	UN proper shipping name	yes
14.2		ADR/RID/ADN: AEROSOLS	yes
14.2		IMDG-Code: AEROSOLS	yes
14.2		ICAO-TI: Aerosols, flammable	yes
14.3	Class: 2 (gases) (aerosol)		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.3	Subsidiary risk(s): 2.1 (flammability)		yes
14.3		ADR/RID/ADN: 2 (2.1)	yes
14.3		IMDG-Code: 2.1	yes
14.3		ICAO-TI: 2.1	yes
14.4	Packing group: not assigned to a packing group	Packing group: not assigned	yes
14.5	Environmental hazards: none (non-environmentally hazardous acc. to the dangerous goods regulations)	Environmental hazards: non-environmentally hazardous acc. to the dangerous goods regulations	yes
14.7	UN number: 1950		yes
14.7	Proper shipping name: AEROSOLS		yes
14.7	Class: 2		yes
14.7	UN number: 1950		yes
14.7	Proper shipping name: AEROSOLS		yes
14.7	Class: 2.1		yes
14.7		Marine pollutant: -	yes
14.7	UN number: 1950		yes
14.7	Proper shipping name: Aerosols, flammable		yes
14.7	Class: 2.1		yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Danger label(s): change in the listing (table)	yes
15.1	• Restrictions according to REACH, Annex XVII		yes
15.1		• Restrictions according to REACH, Annex XVII: change in the listing (table)	yes
15.1	• Directive 75/324/EEC relating to aerosol dispensers		yes
15.1	Classification of the gas/aerosol: extremely flammable		yes
15.1	Labelling: keep out of reach of children pressurized container: may burst if heated keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking do not pierce or burn, even after use protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F		yes

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
15.1	Net contents by volume: 400 ml		yes
15.1	VOC content: 90.78 % 653.8 $^{g}/_{l}$		yes
15.1		Maximum VOC content limit: change in the listing (table)	yes
15.1		VOC content: 653.8 $^{g}/_{l}$	yes
15.1		Maximum VOC content limit: change in the listing (table)	yes
15.1		• Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR): change in the listing (table)	yes
15.1		Pollutant release and transfer registers (PRTR): change in the listing (table)	yes
15.1	• Explosives precursors which are subject to restrictions	Regulation on the marketing and use of explosives precursors: This product is regulated by Regulation (EU) No 2019/1148: All suspicious transactions as well as the loss and theft of significant quantities must be reported to the competent authority.	yes
15.1		Regulation on persistent organic pollutants (POP): none of the ingredients are listed	yes
15.1	• Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)		yes
15.1	Storage class (LGK): 2 B (aerosol dispensers and lighters)		yes
15.1	National inventories		yes
15.1		National inventories: change in the listing (table)	yes
15.1		National inventories	yes
15.1		National inventories: change in the listing (table)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16	Key literature references and sources for data: - Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU - Regulation (EC) No. 1272/2008 (CLP, EU GHS)	Key literature references and sources for data: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations.
2000/39/EC.	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.
2017/164/EU.	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU.
Acute Tox.	Acute toxicity.
ADN.	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways).
ADR.	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road).
ADR/RID/ADN.	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN).
AGW.	Workplace exposure limit.
Aquatic Acute.	Hazardous to the aquatic environment - acute hazard.
Aquatic Chronic.	Hazardous to the aquatic environment - chronic hazard.
Asp. Tox.	Aspiration hazard.
ATE.	Acute Toxicity Estimate.
BCF.	Bioconcentration factor.
BOD.	Biochemical Oxygen Demand.
CAS.	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances).
Ceiling-C.	Ceiling value.
CLP.	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
COD.	Chemical oxygen demand.
DFG.	Deutsche Forschungsgemeinschaft MAK-und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim.
DGR.	Dangerous Goods Regulations (see IATA/DGR).
DNEL.	Derived No-Effect Level.
EC50.	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval.
EC No.	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union).
ED.	Endocrine disruptor.
EINECS.	European Inventory of Existing Commercial Chemical Substances.
EL50.	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms.
ELINCS.	European List of Notified Chemical Substances.
EmS.	Emergency Schedule.
ErC50.	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control.
Eye Dam.	Seriously damaging to the eye.
Eye Irrit.	Irritant to the eye.
Flam. Gas.	Flammable gas.
Flam. Liq.	Flammable liquid.
Flam. Sol.	Flammable solid.
GHS.	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations.
IATA.	International Air Transport Association.
IATA/DGR.	Dangerous Goods Regulations (DGR) for the air transport (IATA).
ICAO.	International Civil Aviation Organization.
ICAO-TI.	Technical instructions for the safe transport of dangerous goods by air.
IMDG.	International Maritime Dangerous Goods Code.
IMDG-Code.	International Maritime Dangerous Goods Code.
Index No.	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008.
IOELV.	Indicative occupational exposure limit value.
LGK.	Lagerklasse (storage class according to TRGS 510, Germany).
Log KOW.	n-Octanol/water.
NLP.	No-Longer Polymer.
PBT.	Persistent, Bioaccumulative and Toxic.
PNEC.	Predicted No-Effect Concentration.
Ppm.	Parts per million.
Press. Gas.	Gas under pressure.
REACH.	Registration, Evaluation, Authorisation and Restriction of Chemicals.
RID.	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail).
Skin Corr.	Corrosive to skin.
Skin Irrit.	Irritant to skin.
STEL.	Short-term exposure limit.
STOT SE.	Specific target organ toxicity - single exposure.
SVHC.	Substance of Very High Concern.
TRGS.	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany).
TRGS 900.	Arbeitsplatzgrenzwerte (TRGS 900).
TRGS 903.	Biologische Grenzwerte (TRGS 903).
TWA.	Time-weighted average.
VOC.	Volatile Organic Compounds.
VPvB.	Very Persistent and very Bioaccumulative.
Water-react.	Material which, in contact with water, emits flammable gases.

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

H220.	Extremely flammable gas.
H221.	Flammable gas.
H222.	Extremely flammable aerosol.
H225.	Highly flammable liquid and vapour.
H226.	Flammable liquid and vapour.
H228.	Flammable solid.
H229.	Pressurised container: May burst if heated.
H261.	In contact with water releases flammable gases.
H280.	Contains gas under pressure; may explode if heated.
H304.	May be fatal if swallowed and enters airways.
H312.	Harmful in contact with skin.
H315.	Causes skin irritation.
H319.	Causes serious eye irritation.
H332.	Harmful if inhaled.
H335.	May cause respiratory irritation.
H336.	May cause drowsiness or dizziness.
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.
H412.	Harmful to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.