

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by
2015/830/EU

OPN-Zinc Spray - zinc grey -

Version number: 1.0
Revision: 14.09.2016

Date of compilation: 26.08.2015

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

Product identifier

Trade name **OPN-Zinc Spray - zinc grey -**

Other means of identification

Article number 63110

Tariff No. 32081010

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

Relevant identified uses professional use
industrial use

Sector of use Long term protection for all metallic surfaces

Uses advised against consumer use (private households)
Do not use for products that are intended for contact
with food - exclude food contact.

Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

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	flammable aerosols	Cat. 1	(Flam. Aerosol 1)	H222,H229
3.3	serious eye damage/eye irritation	Cat. 2	(Eye Irrit. 2)	H319
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	Cat. 3	(STOT SE 3)	H336
4.1C	hazardous to the aquatic environment - chronic hazard	Cat. 2	(Aquatic Chronic 2)	H411

Remarks

For full text of H-phrases: see SECTION 16.

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Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

Label elements

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

Signal word Danger

Pictograms

GHS02, GHS07, GHS09



Hazard statements

H222-H229 Extremely flammable aerosol. Pressurized container: may burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
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.
P260 Do not breathe vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/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.
P312 Call a POISON CENTER/doctor if you feel unwell.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents / container to hazardous or special waste.

Additional labelling requirements

EUH066 Repeated exposure may cause skin dryness or cracking.
Buildup of explosive mixtures possible without sufficient ventilation.

Hazardous ingredients for labelling: acetone

Other hazards

There is no additional information.

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SECTION 3: Composition/information on ingredients

Mixtures

Description of the mixture

Mixture of substances listed below with nonhazardous additions

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
Butane	CAS No 106-97-8 EC No 203-448-7 REACH Reg. No 01-2119474691-32-xxxx	25 - < 50	Flam. Gas 1 / H220 Press. Gas L / H280	 
Acetone	CAS No 67-64-1 EC No 200-662-2 REACH Reg. No 01-2119471330-49-xxxx	10 - < 25	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336	 
Zinc	CAS No 7440-66-6 EC No 231-175-3 REACH Reg. No 01-2119467174-37-xxxx	10 - < 25	Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	
Hydrocarbons, C9, aromatics	EC No 918-668-5 REACH Reg. No 01-2119455851-35-xxxx	5 - < 10	Flam. Liq. 3 / H226 STOT SE 3 / H335 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	   
Propane	CAS No 74-98-6 EC No 200-827-9 REACH Reg. No 01-2119486944-21-xxxx	5 - < 10	Flam. Gas 1 / H220 Press. Gas L / H280	 
Isobutane	CAS No 75-28-5 EC No 200-857-2 REACH Reg. No 01-2119485395-27-xxxx	1 - < 5	Flam. Gas 1 / H220 Press. Gas L / H280	 

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For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

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

Not applicable, as aerosol.

Most important symptoms and effects, both acute and delayed

Narcotic effects.

Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, BC-powder

Unsuitable extinguishing media

water jet

Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

Advice for firefighters

Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Remove undamaged cans from the danger area. If necessary, cool by spraying with water because of bursting. Wear fully protective suit. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

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.

Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose it.

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Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Collect spillage (sawdust, kieselgur (diatomite), sand, universal binder).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

SECTION 7: Handling and storage

Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Prevent from heating up above 50 °C.

Advice on general occupational hygiene

Wash hands after use. Do not to 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.

Conditions for safe storage, including any incompatibilities

Managing of associated risks

Storage class (LGK)

2B.

- Flammability hazards

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

Incompatible substances or mixtures

Separate storage required for storage class: 4.1 A, 4.1 B, 4.2, 4.3, 5.1 A, 5.1 B, 5.2, 6.2, 7.

Consideration of other advice

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
DE	Acetone	67-64-1	AGW	500	1.200	1.000	2.400	TRGS 900
DE	Butane	106-97-8	AGW	1.000	2.400	4.000	9.600	TRGS 900
DE	Isobutane	75-28-5	AGW	1.000	2.400	4.000	9.600	TRGS 900
DE	Propane	74-98-6	AGW	1.000	1.800	4.000	7.200	TRGS 900
DE	Zinc	7440-66-6	MAK		2		4	DFG
DE	Zinc	7440-66-6	MAK		0,1		0,4	DFG
EU	Acetone	67-64-1	IOELV	500	1.210			2000/39/EC

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Notation

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

Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
DE	Acetone	Acetone		BLV	80 mg/l	TRGS 903

Relevant DNELs/DMELs/PNECs and other threshold levels

- relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Acetone	67-64-1	PNEC	100 mg/l	Microorganisms	Sewage treatment plant (STP)	Short-term (single instance)
Acetone	67-64-1	PNEC	21 mg/l	Aquatic organisms	Water	Continuous
Zinc	7440-66-6	PNEC	20,6 µg/l	Aquatic organisms	Freshwater	Short-term (single instance)
Zinc	7440-66-6	PNEC	100 µg/l	Microorganisms	Sewage treatment plant (STP)	Short-term (single instance)

Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Do not spray in eyes. If required use tight-fitting goggles.

Skin protection

Wear protective gloves if necessary.

- type of material

IIR: isobutene-isoprene (butyl) rubber

- material thickness

> 0,7 mm.

- other protection measures

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

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Respiratory protection

In case of inadequate ventilation wear respiratory protection. Particulate filter device (EN 143). Apply outdoors or well ventilated areas.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state	aerosol (spray aerosol)
Colour	grey
Odour	product specific

Other physical and chemical parameters

Initial boiling point and boiling range	Not applicable, as aerosol.*
Flash point	Not applicable, as aerosol.*
Evaporation rate	Not determined
Flammability (solid, gas)	Flammable aerosol in accordance with GHS criteria
Explosive limits	
• lower explosion limit (LEL)	3 vol%
• upper explosion limit (UEL)	15 vol%
Vapour pressure	3,8 bar at 20 °C 6,8 bar at 50 °C
Density	0,86 g/cm³ at 20 °C
Water solubility	insoluble
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	287 °C
Viscosity	not relevant (aerosol)
Explosive properties	none
Oxidising properties	none

Other information

Solvent content	75,25 %
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* The finished mixture in an aerosol container is formed after addition of propellant. Several details are not measurable in an hermetic closed, pressurized container.

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SECTION 10: Stability and reactivity

Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". risk of ignition

Chemical stability

See below "Conditions to avoid".

Possibility of hazardous reactions

No known hazardous reactions.

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.

Physical stresses which might result in a hazardous situation and have to be avoided

high temperatures

Incompatible materials

There is no additional information.

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

Information on toxicological effects

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.

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 sensitisier.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.

Specific target organ toxicity (STOT)

- **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).

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Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Other information

Repeated exposure may cause skin dryness or cracking.

SECTION 12: Ecological information

Toxicity

Toxic to aquatic life.

Water hazard class - WHC (Wassergefährdungsklasse) (WGK; Germany): 2 (hazardous to water)

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Butane	106-97-8	LC50	27,98 mg/l	Fish	96 hours
Butane	106-97-8	EC50	7,71 mg/l	Algae	96 hours
Acetone	67-64-1	LC50	8.120 mg/l	Fish	96 hours
Zinc	7440-66-6	LC50	439 µg/l	Fish	96 hours
Zinc	7440-66-6	EC50	1.833 µg/l	Aquatic invertebrates	48 hours
Hydrocarbons, C9, aromatics		EC50	0,29 mg/l	Algae	72 hours
Propane	74-98-6	LC50	27,98 mg/l	Fish	96 hours
Propane	74-98-6	EC50	7,71 mg/l	Algae	96 hours
Isobutane	75-28-5	LC50	27,98 mg/l	Fish	96 hours
Isobutane	75-28-5	EC50	7,71 mg/l	Algae	96 hours

Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetone	67-64-1	EC50	61,15 g/l	Microorganisms	30 min
Hydrocarbons, C9, aromatics		EC50	>99 mg/l	Microorganisms	10 min

Persistence and degradability

Data are not available.

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Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
Acetone	67-64-1	Carbon dioxide generation	90,9 %	28 d
Hydrocarbons, C9, aromatics		Oxygen depletion	30,9 %	2 d

Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Butane	106-97-8		1,09	
Acetone	67-64-1		-0,24	
Propane	74-98-6		1,09	
Isobutane	75-28-5		1,09	

Mobility in soil

Data are not available.

Results of PBT and vPvB assessment

Data are not available.

Other adverse effects

Data are not available.

Endocrine disrupting potential

The mixture contains substance(s) with an endocrine disrupting potential.

Name of substance	CAS No	Combined category	Human health category	Wildlife category
Di-“isononyl” phthalate	28553-12-0	CAT2	CAT2	CAT3

Legend

CAT2 Category 2 - at least some in vitro evidence of biological activity related to endocrine disruption

CAT3 Category 3 - no evidence of endocrine disruption or no data available

SECTION 13: Disposal considerations

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.

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Relevant provisions relating to waste

List of wastes

15 01 04 Metallic packaging
15 01 10 Packaging containing residues of or contaminated by dangerous substances
16 05 04 Containing hazardous gases in pressure containers (including halons)

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

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2 (gases)
Subsidiary risk(s)	flammability
Packing group	not assigned to a packing group

Environmental hazards

Special precautions for user

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

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

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)

UN number	1950
Proper shipping name	AEROSOLS
Class	2
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)

UN number	1950
Proper shipping name	AEROSOLS
Class	2.1
Danger label(s)	2.1

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Special provisions (SP) 63, 190, 277, 327, 344, 959

Excepted quantities (EQ) E0

Limited quantities (LQ) 1 L

EmS F-D, S-U

• International Civil Aviation Organization (ICAO-IATA/DGR)

UN number 1950

Proper shipping name Aerosols, flammable

Class 2.1

Danger label(s) 2.1



Special provisions (SP) A145, A167

Excepted quantities (EQ) E0

Limited quantities (LQ) 30 kg

SECTION 15: Regulatory information

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)

None of the ingredients are listed.

• Directive 75/324/EEC relating to aerosol dispensers

Classification of the gas/aerosol Extremely flammable

Labelling

Pressurized container: may burst if heated
Keep out of the reach of children
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

• Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)

VOC content 75,25 %
647,2 g/l

Product category	Product subcategory	Coating	VOC g/l
Vehicle refinishing products	Special finishes	All types	840

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 75,25 %

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National regulations (Germany)

- **Administrative Regulation on Substances Hazardous to Water (VwVwS)**

Wassergefährdungsklasse (WGK): 2 (hazardous to water) - classification acc. to annex 3 (VwVwS)

- **Technical instructions on air quality control (Germany)**

Number	Group of substances	Class	Conc.	Mass flow	Mass concentration	Notation
Acc. to 5.2.5	Organic substances		≥ 25 Gew.- %	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)

- **Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)**

Storage class (LGK): 2 B (aerosol dispensers and lighters)

Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

2000/39/EC.	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.
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 européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
Aquatic Acute.	Hazardous to the aquatic environment - acute hazard.
Aquatic Chronic.	Hazardous to the aquatic environment - chronic hazard.
Asp. Tox.	Aspiration hazard.
BCF.	BioConcentration Factor.
BOD.	Biochemical Oxygen Demand.
CAS.	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances).
CLP.	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
CMR.	Carcinogenic, Mutagenic or toxic for Reproduction.
COD.	Chemical oxygen demand.
DFG.	Deutsche Forschungsgemeinschaft MAK- und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim.
DMEL.	Derived Minimal Effect Level.
DNEL.	Derived No-Effect Level.
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).
EmS.	Emergency Schedule.
Eye Dam.	Seriously damaging to the eye.
Eye Irrit.	Irritant to the eye.
Flam. Gas.	Flammable gas.
Flam. Liq.	Flammable liquid.
GHS.	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations.
IATA/DGR.	Dangerous Goods Regulations (DGR) for the air transport (IATA).
ICAO.	International Civil Aviation Organization.
IMDG.	International Maritime Dangerous Goods Code.
LGK.	Lagerklasse (storage class according to TRGS 510, Germany).
Log KOW.	N-octanol/water.
MARPOL.	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant").
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).
STOT SE.	Specific target organ toxicity - single exposure.
TRGS.	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany).

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TRGS 900.	Arbeitsplatzgrenzwerte (TRGS 900).
TRGS 903.	Biologische Grenzwerte (TRGS 903).
VOC.	Volatile Organic Compounds.
VPvB.	Very Persistent and very Bioaccumulative.

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)

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health 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 chapter 2 and 3)

H220.	Extremely flammable gas.
H222.	Extremely flammable aerosol.
H225.	Highly flammable liquid and vapour.
H226.	Flammable liquid and vapour.
H229.	Pressurized container: may burst if heated.
H280.	Contains gas under pressure; may explode if heated.
H304.	May be fatal if swallowed and enters airways.
H319.	Causes serious eye irritation.
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.

Disclaimer

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