



Safety Data Sheet

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

OPN-Zinc Repair Spray - bright silver -

Version number: 3.0
Revision: 11.05.2020

Date of compilation: 09.10.2015

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

1.1 Product identifier

Trade name **OPN-Zinc Repair Spray - bright silver -**

Other means of identification

Article number 63120
Tariff No. 32081010

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

Relevant identified uses professional use
industrial use
Sector of use Corrosion protection and reparation paint
Uses advised against consumer use (private households)
Do not use for products that are intended for contact with food - exclude food contact.

1.3 Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Section | Hazard class | Hazard class and category | Hazard statement |
|---------|---|---------------------------|------------------|
| 2.3 | Aerosols | Aerosol 1 | H222,H229 |
| 3.3 | Serious eye damage/eye irritation | Eye Irrit. 2 | H319 |
| 3.8R | Specific target organ toxicity - single exposure (respiratory tract irritation) | STOT SE 3 | H335 |
| 3.8D | Specific target organ toxicity - single exposure (narcotic effects, drowsiness) | STOT SE 3 | H336 |
| 4.1C | Hazardous to the aquatic environment - chronic hazard | Aquatic Chronic 3 | H412 |

| Code | Supplemental hazard information |
|--------|--|
| EUH066 | Repeated exposure may cause skin dryness or cracking |

Remarks

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

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



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Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H335 May cause respiratory 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.
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.
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 in accordance with national regulations of the disposal.

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
Hydrocarbons, C9, aromatics

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients




3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Mixture of substances listed below with nonhazardous additions

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|-------------------|--|-----------|--|---|
| Butane | CAS No 106-97-8 EC No 203-448-7 Index No 601-004-00-0 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 01-2119498062-37- xxxx | 10 - < 25 | Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336 |  |
| Propane | CAS No 74-98-6 EC No 200-827-9 REACH Reg. No 01-2119486944-21- xxxx | 10 - < 25 | Flam. Gas 1 / H220 Press. Gas L / H280 |  |




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| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|-----------------------------|---|----------|---|---|
| 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 |  |
| Aluminium | CAS No 7429-90-5 EC No 231-072-3 Index No 013-001-00-1 REACH Reg. No 01-2119529243-45- xxxx | 1 - < 5 | Flam. Sol. 1 / H228 |  |
| 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 |  |

3.3 Remarks

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. In case of respiratory tract irritation, consult a physician. 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

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SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
Suitable extinguishing media
Water spray. BC-powder.
Unsuitable extinguishing media
Water jet.
- 5.2 Special hazards arising from the substance or mixture**
In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.
Hazardous combustion products
Nitrogen oxides (NOx). 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.
- 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
Storage class (LGK)
2 B
• Flammability hazards
Do not spray on an open flame or other ignition source. Protect from sunlight.
Consideration of other advice
• Packaging compatibilities
Only packagings which are approved (e.g. acc. to ADR) may be used.
- 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 National limit values

| Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | |
|--|--|-----------|------------|-----------|--------------------------|------------|---------------------------|------------|
| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Source |
| DE | Butane | 106-97-8 | AGW | 1.000 | 2.400 | 4.000 | 9.600 | TRGS 900 |
| DE | (Z)-N-Methyl-N-(1-oxo-9-octadecenyl)glycin (Oleylsarkosin) | 110-25-8 | AGW | | 0,05 | | 0,1 | TRGS 900 |
| DE | Oleoyl sarcosine | 110-25-8 | MAK | | 0,1 | | 0,2 | DFG |
| DE | Acetone | 67-64-1 | AGW | 500 | 1.200 | 1.000 | 2.400 | TRGS 900 |
| DE | Propane | 74-98-6 | AGW | 1.000 | 1.800 | 4.000 | 7.200 | TRGS 900 |
| DE | Aluminium | 7429-90-5 | MAK | | 1,5 | | | DFG |
| DE | Aluminium | 7429-90-5 | MAK | | 4 | | | DFG |
| DE | Isobutane | 75-28-5 | AGW | 1.000 | 2.400 | 4.000 | 9.600 | TRGS 900 |
| EU | Acetone | 67-64-1 | IOELV | 500 | 1.210 | | | 2000/39/EC |

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 (unless otherwise specified)

Biological limit values

| Biological limit values | | | | | | |
|-------------------------|---------------|-----------|----------|------------|---------|----------|
| Country | Name of agent | Parameter | Notation | Identifier | Value | Source |
| DE | Acetone | Acetone | | BLV | 80 mg/l | TRGS 903 |
| DE | Aluminium | Aluminium | Crea | BAT | 60 µg/g | DFG |

Notation

crea Creatinine

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

| Relevant DNELs of components of the mixture | | | | | | |
|---|-----------|----------|------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance | CAS No | Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| Hydrocarbons, C9, aromatics | | DNEL | 150 mg/m ³ | Human, inhalatory | Worker (industry) | Chronic - systemic effects |
| Hydrocarbons, C9, aromatics | | DNEL | 25 mg/kg bw/day | Human, dermal | Worker (industry) | Chronic - systemic effects |
| Aluminium | 7429-90-5 | DNEL | 3,72 mg/m ³ | Human, inhalatory | Worker (industry) | Chronic - local effects |

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Relevant PNECs of components of the mixture

| 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 | Intermittent release |
| Aluminium | 7429-90-5 | PNEC | 74,9 µg/l | Aquatic organisms | Freshwater | Short-term (single instance) |
| Aluminium | 7429-90-5 | PNEC | 20 mg/l | Microorganisms | Sewage treatment plant (STP) | Short-term (single instance) |

8.2 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

Hand protection

Wear suitable gloves.

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.

Respiratory protection

Operate if possible out of doors or in a well-ventilated place. In case of inadequate ventilation wear respiratory protection. Type: A-P2 (combined filters against particles and organic gases and vapours, 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

Appearance

Physical state

Aerosol (Spray aerosol)

Colour

Silver

Odour

Product specific

Other safety parameters

Initial boiling point and boiling range

Not applicable, as aerosol.*

Flash point

Not applicable, as aerosol.*

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

0,67 g/cm³ at 20 °C

Water solubility

Insoluble

Viscosity

Not relevant (Aerosol)

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9.2 Other information

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

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.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

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.

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

High temperatures.

10.5 Incompatible materials

Oxidisers.

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 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.

Acute toxicity estimate (ATE) of components of the mixture

| Name of substance | CAS No | Exposure route | ATE |
|-------------------|-----------|-----------------------|---------------|
| Aluminium | 7429-90-5 | Inhalation: dust/mist | 0,888 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 respiratory irritation. 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

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Ordinance on systems for handling water-polluting substances (Ordinance on facilities for handling substances hazardous to water) (AwSV): WGK (Germany) 2, obviously hazardous to water

| 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 | | EL50 | 4,1 mg/l | Aquatic invertebrates | 24 h |
| Hydrocarbons, C9, aromatics | | EC50 | >99 mg/l | Microorganisms | 10 min |

12.2 Persistence and degradability

| Degradability of components of the mixture | | | | | | |
|--|---------|---------------------------|------------------|------|--------|--------|
| Name of substance | CAS No | Process | Degradation rate | Time | Method | Source |
| Acetone | 67-64-1 | Carbon dioxide generation | 90,9 % | 28 d | | |
| Hydrocarbons, C9, aromatics | | Oxygen depletion | 30,9 % | 2 d | | ECHA |

12.3 Bioaccumulative potential

| Bioaccumulative potential of components of the mixture | | | | |
|--|----------|-----|---------------------------|----------|
| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
| Butane | 106-97-8 | | 1,09 (pH value: 7, 20 °C) | |
| Acetone | 67-64-1 | | -0,24 | |
| Propane | 74-98-6 | | 1,09 (pH value: 7, 20 °C) | |
| Isobutane | 75-28-5 | | 1,09 (pH value: 7, 20 °C) | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

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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

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

| | | |
|------|--|--|
| 14.1 | UN number | 1950 |
| 14.2 | UN proper shipping name | AEROSOLS |
| 14.3 | Transport hazard class(es) | |
| | Class | 2 (Gases) (Aerosol) |
| | Subsidiary risk(s) | 2.1 (Flammable) |
| 14.4 | Packing group | Not assigned to a packing group |
| 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 | 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 |
| Marine pollutant | - |
| Danger label(s) | 2.1 |



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

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Stowage category -
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
Exempted 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)

Restrictions according to REACH, Annex XVII

none of the ingredients are listed

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

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 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.

Additional information

Deco-Paint Directive (2004/42/EC)

VOC content

91,2 %

611 g/l

The maximum content of VOC of the product in a ready to use condition

| Maximum VOC content limit | | | | |
|------------------------------|---------------------|-----------|------|---------|
| Product category | Product subcategory | Coating | Type | VOC g/l |
| Vehicle refinishing products | Special finishes | All types | | 840 |

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

VOC content

91,76 %

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

National regulations (Germany)

Ordinance on systems for handling water-polluting substances (Ordinance on facilities for handling substances hazardous to water)(AwSV)

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)

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

Storage class (LGK)

2 B (Aerosol dispensers and lighters)

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

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). |
| AGW | Workplace exposure limit. |
| 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). |
| 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). |
| DMEL | Derived Minimal Effect Level. |
| 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). |
| 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. |
| 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. |
| IMDG | 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. |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant"). |
| 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). |
| STEL | Short-term exposure limit. |
| STOT SE | Specific target organ toxicity - single exposure. |
| SVHC | Substance of Very High Concern. |

Safety Data Sheet

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

OPN-Zinc Repair Spray - bright silver -

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|----------|---|
| 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. |

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 2015/830/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. 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. |
| H228 | Flammable solid. |
| H229 | Pressurised 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. |
| 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.