

# SAFETY DATA SHEET



Chrome-Silver Spray

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

### 1.1 Product identifier

**Product name** : Chrome-Silver Spray  
**UFI** : J190-A07Q-Y005-995G  
**Product code** : 111030  
**Color** : Silver.-Gray.  
**Product description** : Not available.  
**Product type** : Aerosol.  
**Other means of identification** : Not available.

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

#### Identified uses

Not available.

#### Uses advised against

Not applicable.

### 1.3 Details of the supplier of the safety data sheet

WEICON GmbH & Co. KG  
Königsberger Str. 255,  
48157 Münster, Germany  
phone:+49 251 93220,  
email: info@weicon.de,  
URL: www.weicon.de

**e-mail address of person responsible for this SDS** : msds@weicon.de

### 1.4 Emergency telephone number

#### National advisory body/Poison Center

**Telephone number** : EMERGENCY CONTACT – UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)  
TRANSPORT EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229

Eye Irrit. 2, H319

STOT SE 3, H336

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : 7.5 percent of the mixture consists of component(s) of unknown acute oral toxicity

**Ingredients of unknown ecotoxicity** : Contains 7.5% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

## SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.  
H412 - Harmful to aquatic life with long lasting effects.

#### Precautionary statements

##### General

: P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.

##### Prevention

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 - Do not spray on an open flame or other ignition source.  
P251 - Do not pierce or burn, even after use.  
P261 - Avoid breathing dust or mist.  
P264 - Wash hands thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear eye or face protection.

##### Response

: P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 - If eye irritation persists: Get medical advice or attention.

##### Storage

: P405 - Store locked up.  
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

##### Disposal

: P501 - Dispose of waste according to applicable legislation.

#### Hazardous ingredients

: acetone and butanone

#### Supplemental label elements

: Repeated exposure may cause skin dryness or cracking.

#### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

#### Special packaging requirements

##### Containers to be fitted with child-resistant fastenings

: Not applicable.

##### Tactile warning of danger

: Not applicable.

### 2.3 Other hazards

#### Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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

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## SECTION 2: Hazards identification

Other hazards which do not result in classification : None known.

Aspiration hazard - Not applicable.

## SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
propane	REACH #: 01-2119486944-21 EC: 200-827-9 CAS: 74-98-6 Index: 601-003-00-5	≥10 - ≤25	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-	[1] [2]
butane	REACH #: 01-2119474691-32 EC: 203-448-7 CAS: 106-97-8 Index: 601-004-00-0	≥10 - ≤25	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-	[1] [2]
acetone	REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8	≥10 - ≤25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	-	[1] [2]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5 - <10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	≥5 - ≤10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	-	[1] [2]
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≥5 - ≤9	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
Aluminium powder (stabilized)	REACH #: 01-2119529243-45 EC: 231-072-3 CAS: 7429-90-5 Index: 013-002-00-1	≥5 - ≤10	Flam. Sol. 1, H228 Water-react. 2, H261	-	[1] [2]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥5 - ≤10	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]

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### SECTION 3: Composition/information on ingredients

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

#### Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

#### 4.2 Most important symptoms and effects, both acute and delayed

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- Inhalation** : Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness

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## SECTION 4: First aid measures

- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

## SECTION 6: Accidental release measures

- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- 6.3 Methods and materials for containment and cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P3a	150 tonnes	500 tonnes

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## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
propane	<p><b>DFG MAC-values list (Germany, 7/2024)</b> Develop D.                      TWA 8 hours: 1000 ppm.                      PEAK 15 minutes: 4000 ppm 4 times per shift [Interval: 1 hour].                      TWA 8 hours: 1800 mg/m<sup>3</sup>.                      PEAK 15 minutes: 7200 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p> <p><b>TRGS 900 OEL (Germany, 3/2025)</b>                      TWA 8 hours: 1800 mg/m<sup>3</sup>.                      PEAK 15 minutes: 7200 mg/m<sup>3</sup>.                      TWA 8 hours: 1000 ppm.                      PEAK 15 minutes: 4000 ppm.</p>
butane	<p><b>DFG MAC-values list (Germany, 7/2024) [Butane]</b> Develop D.                      TWA 8 hours: 1000 ppm.                      PEAK 15 minutes: 4000 ppm 4 times per shift [Interval: 1 hour].                      TWA 8 hours: 2400 mg/m<sup>3</sup>.                      PEAK 15 minutes: 9600 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p> <p><b>TRGS 900 OEL (Germany, 3/2025)</b>                      TWA 8 hours: 2400 mg/m<sup>3</sup>.                      PEAK 15 minutes: 9600 mg/m<sup>3</sup>.                      TWA 8 hours: 1000 ppm.                      PEAK 15 minutes: 4000 ppm.</p>
acetone	<p><b>DFG MAC-values list (Germany, 7/2024)</b> Develop B.                      TWA 8 hours: 500 ppm.                      PEAK 15 minutes: 1000 ppm 4 times per shift [Interval: 1 hour].                      TWA 8 hours: 1200 mg/m<sup>3</sup>.                      PEAK 15 minutes: 2400 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p> <p><b>TRGS 900 OEL (Germany, 3/2025)</b>                      TWA 8 hours: 1200 mg/m<sup>3</sup>.                      PEAK 15 minutes: 2400 mg/m<sup>3</sup>.                      TWA 8 hours: 500 ppm.                      PEAK 15 minutes: 1000 ppm.</p> <p><b>EU OEL (Europe, 1/2022)</b>                      TWA 8 hours: 500 ppm.                      TWA 8 hours: 1210 mg/m<sup>3</sup>.</p>
xylene	<p><b>DFG MAC-values list (Germany, 7/2024) [Xylene]</b> Develop D.                      Absorbed through skin.                      TWA 8 hours: 50 ppm.                      PEAK 15 minutes: 100 ppm 4 times per shift [Interval: 1 hour].                      TWA 8 hours: 220 mg/m<sup>3</sup>.                      PEAK 15 minutes: 440 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p> <p><b>TRGS 900 OEL (Germany, 3/2025) [Xylol]</b> Absorbed through skin.                      TWA 8 hours: 220 mg/m<sup>3</sup>.                      PEAK 15 minutes: 440 mg/m<sup>3</sup>.                      TWA 8 hours: 50 ppm.                      PEAK 15 minutes: 100 ppm.</p> <p><b>EU OEL (Europe, 1/2022) [xylene, mixed isomers]</b> Absorbed</p>

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## SECTION 8: Exposure controls/personal protection

butanone

through skin.

TWA 8 hours: 50 ppm.

TWA 8 hours: 221 mg/m<sup>3</sup>.

STEL 15 minutes: 100 ppm.

STEL 15 minutes: 442 mg/m<sup>3</sup>.

**DFG MAC-values list (Germany, 7/2024)** Develop C. Absorbed through skin.

TWA 8 hours: 200 ppm.

PEAK 15 minutes: 200 ppm 4 times per shift [Interval: 1 hour].

TWA 8 hours: 600 mg/m<sup>3</sup>.

PEAK 15 minutes: 600 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].

**TRGS 900 OEL (Germany, 3/2025)** Absorbed through skin.

TWA 8 hours: 600 mg/m<sup>3</sup>.

PEAK 15 minutes: 600 mg/m<sup>3</sup>.

TWA 8 hours: 200 ppm.

PEAK 15 minutes: 200 ppm.

**EU OEL (Europe, 1/2022)**

TWA 8 hours: 200 ppm.

TWA 8 hours: 600 mg/m<sup>3</sup>.

STEL 15 minutes: 300 ppm.

STEL 15 minutes: 900 mg/m<sup>3</sup>.

Aluminium powder (stabilized)

**DFG MAC-values list (Germany, 7/2024) [Aluminium compounds, soluble (non-irritating)]** Develop C.

PEAK 15 minutes: 0.01 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].

Form: inhalable fraction.

TWA 8 hours: 0.005 mg/m<sup>3</sup>. Form: inhalable fraction.

**DFG MAC-values list (Germany, 7/2024) [Aluminium compounds, soluble (irritating)]** Develop C.

PEAK 15 minutes: 0.0004 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour]. Form: inhalable fraction.

TWA 8 hours: 0.0002 mg/m<sup>3</sup>. Form: inhalable fraction.

**DFG MAC-values list (Germany, 7/2024) [Aluminium and its poorly soluble compounds]** Carc 4, Develop D.

PEAK 15 minutes: 4 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].

Form: inhalable fraction.

PEAK 15 minutes: 0.4 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].

Form: respirable fraction.

TWA 8 hours: 0.5 mg/m<sup>3</sup>. Form: inhalable fraction.

TWA 8 hours: 0.05 mg/m<sup>3</sup>. Form: respirable fraction.

**TRGS 900 OEL (Germany, 3/2025) [Allgemeiner Staubgrenzwert]**

TWA 8 hours: 1.25 mg/m<sup>3</sup>. Form: alveolar fraction.

PEAK 15 minutes: 20 mg/m<sup>3</sup>. Form: inhalable fraction.

TWA 8 hours: 10 mg/m<sup>3</sup>. Form: inhalable fraction.

PEAK 15 minutes: 2.5 mg/m<sup>3</sup>. Form: alveolar fraction.

n-butyl acetate

**DFG MAC-values list (Germany, 7/2024)** Develop C.

TWA 8 hours: 100 ppm.

PEAK 15 minutes: 200 ppm 4 times per shift [Interval: 1 hour].

TWA 8 hours: 480 mg/m<sup>3</sup>.

PEAK 15 minutes: 960 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].

**TRGS 900 OEL (Germany, 3/2025)**

TWA 8 hours: 300 mg/m<sup>3</sup>.

TWA 8 hours: 62 ppm.

PEAK 15 minutes: 600 mg/m<sup>3</sup>.

PEAK 15 minutes: 124 ppm.

**EU OEL (Europe, 1/2022)**

STEL 15 minutes: 150 ppm.

STEL 15 minutes: 723 mg/m<sup>3</sup>.

TWA 8 hours: 241 mg/m<sup>3</sup>.

TWA 8 hours: 50 ppm.

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## SECTION 8: Exposure controls/personal protection

### Biological exposure indices

Product/ingredient name	Exposure indices
acetone	<p><b>DFG BEI-values list (Germany, 7/2024)</b> BEI: 50 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift.</p> <p><b>TRGS 903 - BEI Values (Germany, 10/2024)</b> BEI: 50 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift.</p>
xylene	<p><b>DFG BEI-values list (Germany, 7/2024) [Xylene (all isomers)]</b> Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 1800 mg/g creatinine, Methylhippuric acids (=toluric acids) (all isomers) [in urine]. Sampling time: end of exposure or end of shift.</p> <p><b>TRGS 903 - BEI Values (Germany, 10/2024) [Xylol alle Isomeren]</b> BEI: 2000 mg/l, methylhippuric acid [in urine]. Sampling time: end of exposure or end of shift.</p>
butanone	<p><b>DFG BEI-values list (Germany, 7/2024)</b> Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 2 mg/l, 2-butanone [in urine]. Sampling time: end of exposure or end of shift.</p> <p><b>TRGS 903 - BEI Values (Germany, 10/2024)</b> BEI: 2 mg/l, 2-butanone [in urine]. Sampling time: end of exposure or end of shift.</p>
Aluminium powder (stabilized)	<p><b>DFG BEI-values list (Germany, 7/2024)</b> BEI: 50 µg/g creatinine, aluminium [in urine]. Sampling time: at the end of the shift, for long-term exposures after several previous shifts.</p> <p><b>TRGS 903 - BEI Values (Germany, 10/2024)</b> BEI: 50 µg/g creatinine, aluminum [in urine]. Sampling time: at the end of the shift, for long-term exposure after several previous shifts.</p>

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs

#### Product/ingredient name

acetone

#### Result

##### **DNEL - General population - Long term - Oral**

62 mg/kg bw/day  
Effects: Systemic

##### **DNEL - General population - Long term - Dermal**

62 mg/kg bw/day  
Effects: Systemic

##### **DNEL - Workers - Long term - Dermal**

186 mg/kg bw/day  
Effects: Systemic

##### **DNEL - General population - Long term - Inhalation**

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## SECTION 8: Exposure controls/personal protection

200 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

1210 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Short term - Inhalation**

2420 mg/m<sup>3</sup>  
Effects: Local

xylene

**DNEL - General population - Long term - Oral**

5 mg/kg bw/day  
Effects: Systemic

**DNEL - General population - Long term - Inhalation**

65.3 mg/m<sup>3</sup>  
Effects: Local

**DNEL - General population - Long term - Inhalation**

65.3 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - General population - Long term - Dermal**

125 mg/kg bw/day  
Effects: Systemic

**DNEL - Workers - Long term - Dermal**

212 mg/kg bw/day  
Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

221 mg/m<sup>3</sup>  
Effects: Local

**DNEL - Workers - Long term - Inhalation**

221 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - General population - Short term - Inhalation**

260 mg/m<sup>3</sup>  
Effects: Local

**DNEL - General population - Short term - Inhalation**

260 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Short term - Inhalation**

442 mg/m<sup>3</sup>  
Effects: Local

**DNEL - Workers - Short term - Inhalation**

442 mg/m<sup>3</sup>  
Effects: Systemic

butanone

**DNEL - General population - Long term - Oral**

31 mg/kg bw/day  
Effects: Systemic

**DNEL - General population - Long term - Inhalation**

106 mg/m<sup>3</sup>  
Effects: Systemic

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## SECTION 8: Exposure controls/personal protection

**DNEL - General population - Long term - Dermal**  
412 mg/kg bw/day  
Effects: Systemic

**DNEL - General population - Short term - Inhalation**  
450 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Long term - Inhalation**  
600 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Short term - Inhalation**  
900 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Long term - Dermal**  
1161 mg/kg bw/day  
Effects: Systemic

Solvent naphtha (petroleum), light arom.

**DNEL - General population - Long term - Inhalation**  
0.41 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Long term - Inhalation**  
1.9 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - General population - Long term - Inhalation**  
178.57 mg/m<sup>3</sup>  
Effects: Local

**DNEL - General population - Short term - Inhalation**  
640 mg/m<sup>3</sup>  
Effects: Local

**DNEL - Workers - Long term - Inhalation**  
837.5 mg/m<sup>3</sup>  
Effects: Local

**DNEL - Workers - Short term - Inhalation**  
1066.67 mg/m<sup>3</sup>  
Effects: Local

**DNEL - General population - Short term - Inhalation**  
1152 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - Workers - Short term - Inhalation**  
1286.4 mg/m<sup>3</sup>  
Effects: Systemic

Aluminium powder (stabilized)

**DNEL - Workers - Long term - Inhalation**  
3.72 mg/m<sup>3</sup>  
Effects: Local

**DNEL - Workers - Long term - Inhalation**  
3.72 mg/m<sup>3</sup>  
Effects: Systemic

**DNEL - General population - Long term - Oral**  
3.95 mg/kg bw/day  
Effects: Systemic

Chrome-Silver Spray

## SECTION 8: Exposure controls/personal protection

n-butyl acetate

**DNEL - General population - Long term - Oral**

2 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Oral**

2 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Dermal**

3.4 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Dermal**

6 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Long term - Dermal**

7 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Short term - Dermal**

11 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

12 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

35.7 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Long term - Inhalation**

48 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - General population - Short term - Inhalation**

300 mg/m<sup>3</sup>

Effects: Local

**DNEL - General population - Short term - Inhalation**

300 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

300 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Short term - Inhalation**

600 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Short term - Inhalation**

600 mg/m<sup>3</sup>

Effects: Systemic

### PNECs

Not available.

## 8.2 Exposure controls

## SECTION 8: Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Gas.
- Color** : Silver.-Gray.
- Odor** : Characteristic. [Strong]
- Odor threshold** : Not available.
- Melting point/freezing point** : Not applicable.

Chrome-Silver Spray

## SECTION 9: Physical and chemical properties

<b>Boiling point or initial boiling point and boiling range</b>	: Not available.
<b>Flammability</b>	: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Highly flammable in the presence of the following materials or conditions: heat.
<b>Lower and upper explosion limit</b>	: Lower: 1.5% Upper: 13%
<b>Flash point</b>	: Closed cup: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not available.
<b>pH</b>	: Not applicable.
<b>Viscosity</b>	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): >20.5 mm <sup>2</sup> /s
<b>Solubility</b>	: Not available.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient n-octanol/water (log Pow)</b>	: Not applicable.
<b>Vapor pressure</b>	: Not available.
<b>Relative density</b>	: Not applicable.
<b>Density</b>	: 0.8 g/cm <sup>3</sup> [20°C (68°F)]
<b>Relative vapor density</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

<b>Fire point</b>	: >200°C
<b>Heat of combustion</b>	: 31.62 kJ/g
<b>Explosive properties</b>	: Not available.
<b>Oxidizing properties</b>	: Not available.

#### Aerosol product

**Type of aerosol** : Spray

#### 9.2.2 Other safety characteristics

**Miscible with water** : No.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>10.5 Incompatible materials</b>	: No specific data.

Chrome-Silver Spray

## SECTION 10: Stability and reactivity

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

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

#### Acute toxicity

##### Product/ingredient name

##### Result

butane

**Rat - Inhalation - LC50 Vapor**

658000 mg/m<sup>3</sup> [4 hours]

acetone

**Rat - Oral - LD50**

5800 mg/kg

Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor

xylene

**Rat - Oral - LD50**

4300 mg/kg

Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes

**Mouse - Oral - LD50**

2119 mg/kg

**Human - Oral - LDLo**

50 mg/kg

**Mouse - Dermal - TDLo**

727.3 ul/kg

Toxic effects: Metabolism (intermediary) - Effect on inflammation or mediation of inflammation

**Rat - Oral - LD50**

4300 mg/kg

**Human - Oral - LDLo**

50 mg/kg

**Rabbit - Dermal - TDLo**

4300 mg/kg

Toxic effects: Skin After topical exposure - Corrosive

butanone

**Rabbit - Dermal - LD50**

6480 mg/kg

**Rat - Oral - LD50**

2737 mg/kg

n-butyl acetate

**Rat - Oral - LD50**

10768 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Other changes Liver - Other changes

**Rabbit - Dermal - LD50**

>17600 mg/kg

**Rat - Male, Female - Inhalation - LC50 Vapor**

>21 mg/l [4 hours]

OECD 403

**Conclusion/Summary [Product]** : Not available.

Chrome-Silver Spray

## SECTION 11: Toxicological information

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Chrome-Silver Spray	N/A	14666.7	N/A	146.7	N/A
butane	N/A	N/A	N/A	658	N/A
acetone	5800	N/A	N/A	N/A	N/A
xylene	N/A	1100	N/A	11	N/A
butanone	2737	6480	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	N/A	N/A

### Skin corrosion/irritation

#### Product/ingredient name

acetone

#### Result

##### Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

##### Rabbit - Skin - Mild irritant

Amount/concentration applied: 395 mg

xylene

##### Rat - Skin - Mild irritant

Duration of treatment/exposure: 8 hours

Amount/concentration applied: 60 uL

##### Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

##### Rabbit - Skin - Moderate irritant

Amount/concentration applied: 100 %

butanone

##### Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 14 mg

##### Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 402 mg

##### Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : Irritating to skin.

### Serious eye damage/eye irritation

#### Product/ingredient name

acetone

#### Result

##### Human - Eyes - Mild irritant

Amount/concentration applied: 186300 ppm

##### Rabbit - Eyes - Mild irritant

Amount/concentration applied: 10 uL

##### Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 20 mg

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## SECTION 11: Toxicological information

### Rabbit - Eyes - Severe irritant

Amount/concentration applied: 20 mg

xylene

### Rabbit - Eyes - Mild irritant

Amount/concentration applied: 87 mg

### Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 5 mg

**Conclusion/Summary [Product]** : Irritating to eyes.

### Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not available.

### Respiratory or skin sensitization

Not available.

### Skin

**Conclusion/Summary [Product]** : Not available.

### Respiratory

**Conclusion/Summary [Product]** : Not available.

### Germ cell mutagenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Reproductive toxicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

#### **Product/ingredient name**

acetone

xylene

butanone

Solvent naphtha (petroleum), light arom.

n-butyl acetate

#### **Result**

STOT SE 3, H336 (Narcotic effects)

STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H336 (Narcotic effects)

STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H336 (Narcotic effects)

STOT SE 3, H336 (Narcotic effects)

### Specific target organ toxicity (repeated exposure)

#### **Product/ingredient name**

xylene

#### **Result**

STOT RE 2, H373

## SECTION 11: Toxicological information

### Aspiration hazard

#### Product/ingredient name

xylene  
Solvent naphtha (petroleum), light arom.

#### Result

ASPIRATION HAZARD - Category 1  
ASPIRATION HAZARD - Category 1

### Information on the likely routes of exposure

Not available.

### Potential acute health effects

#### Eye contact

: Causes serious eye irritation.

#### Inhalation

: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

#### Skin contact

: Defatting to the skin. May cause skin dryness and irritation.

#### Ingestion

: Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

#### Eye contact

: Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

#### Inhalation

: Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness

#### Skin contact

: Adverse symptoms may include the following:  
irritation  
dryness  
cracking

#### Ingestion

: No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary [Product]** : Not available.

#### General

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

#### Carcinogenicity

: No known significant effects or critical hazards.

#### Mutagenicity

: No known significant effects or critical hazards.

#### Reproductive toxicity

: No known significant effects or critical hazards.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Not available.

Chrome-Silver Spray

## SECTION 11: Toxicological information

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product/ingredient name

acetone

#### Result

##### Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia magna*

10 mg/l [48 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia pulex*

Age: <24 hours

8800 mg/l [48 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia cucullata*

Age: 11 days

7460 mg/l [48 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia cucullata*

Age: 11 days

7810 mg/l [48 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Crustaceans - Aquatic sowbug - *Asellus aquaticus*

7550 mg/l [48 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Crustaceans - Scud - *Gammarus pulex*

6000 mg/l [48 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 28 days; Size: 19.2 mm; Weight: 0.076 g

7280 mg/l [96 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 33 days; Size: 22.6 mm; Weight: 0.159 g

8120 mg/l [96 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 32 days; Size: 18 mm; Weight: 0.087 g

6210 mg/l [96 hours]

Effect: Mortality

##### Acute - LC50 - Fresh water

## SECTION 12: Ecological information

Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate

Age: <12 hours

8098 mg/l [48 hours]

Effect: Mortality

### Acute - EC50 - Fresh water

Algae - Green algae - *Selenastrum sp.*

7200 mg/l [96 hours]

Effect: Population

### Chronic - NOEC - Marine water

Algae - Green algae - *Ulva pertusa*

4.95 mg/l [96 hours]

Effect: Reproduction

### Acute - EC50 - Marine water

Algae - Green algae - *Ulva pertusa*

20.565 mg/l [96 hours]

Effect: Reproduction

### Chronic - NOEC - Marine water

Algae - Diatom - *Skeletonema costatum*

100 µl/l [72 hours]

Effect: Population

### Chronic - NOEC - Marine water

Algae - Diatom - *Skeletonema costatum*

100 µl/l [96 hours]

Effect: Population

### Chronic - NOEC - Marine water

Algae - Dinoflagellate - *Karenia brevis*

0.5 ml/l [96 hours]

Effect: Population

### Acute - LC50 - Marine water

ISO

Crustaceans - Calanoid copepod - *Acartia tonsa* - Copepodid

4.42589 ml/l [48 hours]

Effect: Mortality

### Acute - LC50 - Fresh water

Crustaceans - Scud - *Gammarus pulex* - Juvenile (Fledgling, Hatchling, Weanling)

Size: 5 to 10 mm

11.26487 ml/l [48 hours]

Effect: Mortality

### Acute - LC50 - Fresh water

Fish - Rainbow trout, donaldson trout - *Oncorhynchus mykiss*

Age: 4 to 12 months; Size: 2 to 10 cm; Weight: 0.5 to 14 g

8000 ppm [96 hours]

Effect: Mortality

### Acute - LC50 - Fresh water

Fish - Guppy - *Poecilia reticulata*

Age: 4 to 12 months; Size: 2 to 10 cm; Weight: 0.5 to 14 g

5600 ppm [96 hours]

Effect: Mortality

### Chronic - NOEC - Fresh water

Crustaceans - Daphnia - *Daphniidae*

Chrome-Silver Spray

## SECTION 12: Ecological information

0.016 ml/l [21 days]

Effect: Population

### **Chronic - NOEC - Marine water**

Fish - Threespine stickleback - *Gasterosteus aculeatus* - Larvae

Age: 7 days

5 µg/l [42 days]

Effect: Growth

xylene

### **Acute - LC50 - Marine water**

Crustaceans - Daggerblade grass shrimp - *Palaemon pugio*  
8500 µg/l [48 hours]

Effect: Mortality

### **Acute - LC50 - Fresh water**

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 days; Size: 18.4 mm; Weight: 0.077 g

13.4 mg/l [96 hours]

Effect: Mortality

### **Acute - LC50 - Fresh water**

Fish - Goldfish - *Carassius auratus*

Age: 1 to 1.5 years; Size: 13 to 20 cm; Weight: 20 to 80 g

16.94 mg/l [96 hours]

Effect: Mortality

### **Acute - LC50 - Fresh water**

Fish - Bluegill - *Lepomis macrochirus* - Juvenile (Fledgling, Hatchling, Weanling)

Size: 3.65 cm; Weight: 0.9 g

15.7 mg/l [96 hours]

Effect: Mortality

### **Acute - LC50 - Fresh water**

Fish - Bluegill - *Lepomis macrochirus*

Size: 3.8 to 6.4 cm; Weight: 1 to 2 g

20.87 mg/l [96 hours]

Effect: Mortality

### **Acute - LC50 - Fresh water**

Fish - Bluegill - *Lepomis macrochirus*

Weight: 0.8 g

19 mg/l [96 hours]

Effect: Mortality

### **Acute - LC50 - Marine water**

Crustaceans - Daggerblade grass shrimp - *Palaemon pugio* - Adult

8.5 ppm [48 hours]

Effect: Mortality

### **Acute - EC50 - Fresh water**

Crustaceans - Ostracod - *Cypris subglobosa*

90 mg/l [48 hours]

Effect: Intoxication

butanone

### **Acute - EC50 - Fresh water**

Daphnia - Water flea - *Daphnia magna* - Larvae

Age: <24 hours

5091 mg/l [48 hours]

Effect: Intoxication

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## SECTION 12: Ecological information

### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 days; Size: 22 mm; Weight: 0.167 g

3220 mg/l [96 hours]

Effect: Mortality

### Acute - EC50 - Marine water

Algae - Diatom - *Skeletonema costatum*

>500 mg/l [96 hours]

Effect: Population

Aluminium powder (stabilized)

### Chronic - NOEC - Fresh water

Aquatic plants - Coontail - *Ceratophyllum demersum*

Weight: 3.5 g

9 mg/l [3 days]

Effect: Enzymes

n-butyl acetate

### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 to 32 days; Size: 21.6 mm; Weight: 0.175 g

18 mg/l [96 hours]

Effect: Mortality

### Acute - LC50 - Fresh water

Fish - Zebra danio - *Danio rerio*

62 mg/l [96 hours]

Effect: Mortality

### Acute - LC50 - Marine water

Crustaceans - Brine shrimp - *Artemia salina*

32 mg/l [48 hours]

Effect: Mortality

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
propane	1.09	-	Low
butane	1.09	-	Low
acetone	-0.23	-	Low
xylene	3.12	8.1 to 25.9	Low
butanone	0.3	-	Low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	High
n-butyl acetate	2.3	-	Low

### 12.4 Mobility in soil

Soil/Water partition coefficient

Chrome-Silver Spray

## SECTION 12: Ecological information

Product/ingredient name	logKoc	Koc
propane	0.94	8.6207
butane	1.4	22.8012
acetone	0.56	3.6548
butanone	1.2	15.8984
n-butyl acetate	1.5	33.2139

### Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
propane	No	No	No	No	No	No	No
butane	No	No	No	No	No	No	No
acetone	No	No	No	No	No	No	No
xylene	N/A	N/A	N/A	Yes	N/A	N/A	N/A
butanone	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light arom.	No	No	No	No	No	No	No
Aluminium powder (stabilized)	No	No	No	No	No	No	No
n-butyl acetate	No	No	No	No	No	No	No

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

#### Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
propane	No	N/A	N/A	No	N/A	N/A	N/A
butane	No	N/A	N/A	No	N/A	N/A	N/A
acetone	N/A	N/A	N/A	Yes	N/A	N/A	N/A
xylene	No	N/A	No	Yes	No	N/A	No
butanone	No	N/A	N/A	No	N/A	N/A	N/A
Solvent naphtha (petroleum), light arom.	No	N/A	No	No	No	N/A	No
Aluminium powder (stabilized)	No	No	No	No	No	No	No
n-butyl acetate	No	N/A	N/A	No	N/A	N/A	N/A

#### Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
propane	No	No	No	No	No	No	No
butane	No	No	No	No	No	No	No
acetone	No	No	No	No	No	No	No
xylene	No	N/A	No	Yes	No	N/A	No
butanone	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light arom.	No	No	No	No	No	No	No
Aluminium powder (stabilized)	No	No	No	No	No	No	No
n-butyl acetate	No	No	No	No	No	No	No

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PBT or vPvB.

#### Regulation (EC) No. 1272/2008 [CLP]

### 12.6 Endocrine disrupting properties

Not available.

Chrome-Silver Spray

## SECTION 12: Ecological information

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

#### European waste catalogue (EWC)

Waste code	Waste designation
16 05 04*	gases in pressure containers (including halons) containing hazardous substances

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Can	15 01 10* packaging containing residues of or contaminated by hazardous substances

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN1950	UN1950	UN1950	UN1950
<b>14.2 UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
<b>14.3 Transport hazard class(es)</b>	2 	2 	2.1 	2.1 
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.

#### Additional information

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## SECTION 14: Transport information

- ADR/RID** : **Limited quantity** 1 L  
**Special provisions** 190, 327, 625, 344  
**Tunnel code** (D)  
**ADR Classification Code:** 5F
- ADN** : **Special provisions** 190, 327, 625, 344
- IMDG** : **Emergency schedules** F-D, S-U  
**Special provisions** 63, 190, 277, 327, 344, 381, 959
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.  
**Special provisions** A145, A167, A802

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorization**

**Annex XIV**

None of the components are listed above the relevant limit.

**Substances of very high concern**

None of the components are listed above the relevant limit.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Product/ingredient name	%	Designation [Usage]
propane	≥10 - ≤25	40

**Labeling** : Not applicable.

**Synthetic polymer microparticles - Designation 78**

**Generic identity of polymer(s)** :  Not applicable.

**Total percentage of synthetic polymer microparticles** :  Not applicable.

**Other EU regulations**

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Listed

**Explosive precursors** : This product is regulated by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

**Ozone depleting substances (EU 2024/590)**

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## SECTION 15: Regulatory information

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

**Aerosol dispensers** :

3



Extremely flammable

### Seveso Directive

This product is controlled under the Seveso Directive.

### Danger criteria

#### Category

P3a

### Annex VIIA - Labelling for Contents

#### Identification

aromatic hydrocarbons

#### Concentration

5% or over but less than 15%

**VOC content** : 96 %

**VOC (g/L)** : 645

### National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
propane	DFG MAC-values list	-	Develop D	-
butane	DFG MAC-values list	Butane	Develop D	-
acetone	DFG MAC-values list	-	Develop B	-
xylene	DFG MAC-values list	Xylene	Develop D	-
butanone	DFG MAC-values list	-	Develop C	-
aluminium powder (stabilised)	DFG MAC-values list	Aluminium compounds, soluble (non-irritating)	Develop C	-
	DFG MAC-values list	Aluminium compounds, soluble (irritating)	Develop C	-
	DFG MAC-values list	Aluminium and its poorly soluble compounds	Carc 4, Develop D	-
n-butyl acetate	DFG MAC-values list	-	Develop C	-

**Storage class (TRGS 510)** : 2B

### Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

### Danger criteria

#### Category

P3a

#### Reference number

1.2.3.1

**Hazard class for water** : 2

### Technical instruction on air quality control (TA Luft)

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## SECTION 15: Regulatory information

Number [Class]	Description	%
5.2.1	Total dust	5.5
5.2.5	Organic substances	85.8
5.2.5 [I]	Organic substances	79.5

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: All components are listed or exempted.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

📌 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- B = Bioaccumulative
- BCF = Bioconcentration Factor
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization

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## SECTION 16: Other information

M = Mobile  
 N/A = Not available  
 P = Persistent  
 PBT = Persistent, Bioaccumulative and Toxic  
 PMT = Persistent, Mobile and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 T = Toxic  
 vB = Very Bioaccumulative  
 vM = Very Mobile  
 vP = Very Persistent  
 vPvB = Very Persistent and Very Bioaccumulative  
 vPvM = Very Persistent and Very Mobile

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aerosol 1, H222, H229 Eye Irrit. 2, H319 STOT SE 3, H336 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method

### Full text of abbreviated H statements

H220	Extremely flammable gas.
H222, H229	Extremely flammable aerosol. Pressurized container: may burst if heated.
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H228	Flammable solid.
H261	In contact with water releases flammable gas.
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.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

### Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 1	AEROSOLS - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Gas 1A	FLAMMABLE GASES - Category 1A
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Flam. Sol. 1	FLAMMABLE SOLIDS - Category 1
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3
Water-react. 2	SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 2

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Chrome-Silver Spray

## SECTION 16: Other information

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### Notice to reader

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