



HEAT RESISTANT SILVER
Code: AE0140204



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SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

| | | |
|-----|--|--|
| 1.1 | PRODUCT IDENTIFIER: | HEAT RESISTANT SILVER Code: AE0140204 |
| 1.2 | RELEVANT IDENTIFIED USES AND USES ADVISED AGAINST: <u>Intended uses (main technical functions):</u> Paint. <u>Sectors of use:</u> Professional uses (SU22). Consumer uses (SU21). <u>Uses advised against:</u> # <i>This product is not recommended for any use or sector of use (industrial, professional or consume) other than those previously listed as 'Intended or identified uses'.</i> <u>Restrictions on manufacture, placing on market and use, according to Annex XVII of Regulation (EC) No. 1907/2006:</u> Not restricted. | [] Industrial [X] Professional [X] Consumers |
| 1.3 | DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET: MONTANA COLORS, S.L. Pol. Ind. Pla de les Vives - c/Anaïs Nin 6 - 08295 Sant Vicenç de Castellet (Barcelona) ESPAÑA Phone: +34 93 8332760 - Fax: +34 93 8332761 - www.montanacolors.com <u>E-mail address of the person responsible for the Safety Data Sheet:</u> e-mail: msds@montanacolors.com | |
| 1.4 | EMERGENCY TELEPHONE NUMBER: | +34 93 8332787 (9:00-17:00 h.) (working hours) |

SECTION 2 : HAZARDS IDENTIFICATION

| | | | | | | |
|--|--|---|-------------------------|---------------------------|--------------------------|---|
| 2.1 | CLASSIFICATION OF THE SUBSTANCE OR MIXTURE: # <u>Classification in accordance with Regulation (EU) No. 1272/2008-2017/776 (CLP):</u> DANGER: Flam. Aerosol 1:H222+H229 Skin Irrit. 2:H315 Eye Irrit. 2:H319 STOT SE (narcosis) 3:H336 Aquatic Chronic 3:H412 EUH066 | | | | | |
| | Danger class | Classification of the mixture | Cat. | Routes of exposure | Target organs | Effects |
| | <u>Physicochemical:</u> | Flam. Aerosol 1:H222+H229 Skin Irrit. 2:H315 Eye Irrit. 2:H319 | Cat.1 Cat.2 Cat.2 | - Skin Eyes | - Skin Eyes CNS | - Irritation Irritation Narcosis |
| | <u>Human health:</u> | STOT SE (narcosis) 3:H336 Aquatic Chronic 3:H412 EUH066 | Cat.3 Cat.3 - | Inhalation - Skin | - Skin | - Dryness, Cracking |
| | <u>Environment:</u> | | | | | |
| Full text of hazard statements mentioned is indicated in section 16. | | | | | | |
| Note: When in section 3 a range of percentages is used, the health and environmental hazards describe the effects of the highest concentration of each component, but below the maximum value. | | | | | | |
| 2.2 | LABEL ELEMENTS: # <i>This product is labelled with the signal word DANGER in accordance with Regulation (EU) No. 1272/2008-2017/776 (CLP)</i> | | | | | |
| | <u>Hazard statements:</u> | | | | | |
| | H222 | Extremely flammable aerosol. | | | | |
| | H229 | Pressurised container: may burst if heated. | | | | |
| | H319 | Causes serious eye irritation. | | | | |
| | H315 | Causes skin irritation. | | | | |
| | H336 | May cause drowsiness or dizziness. | | | | |
| | H412 | Harmful to aquatic life with long lasting effects. | | | | |
| | <u>Precautionary statements:</u> | | | | | |
| | P101 | If medical advice is needed, have product container or label at hand. | | | | |
| | P102 | Keep out of reach of children. | | | | |
| | P103 | Read label before use. | | | | |
| | 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. | | | | |
| | P264a | Wash the hands thoroughly after handling. | | | | |
| | P337+P313 | If eye irritation persists: Get medical attention. | | | | |
| | P271-P260d | Use only outdoors or in a well-ventilated area. Do not breathe spray. | | | | |
| | P303+P361+P353-P352-P312 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash with plenty of soap and water. Call a POISON CENTER or doctor if you feel unwell. | | | | |
| | P304+P340-P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. | | | | |
| | P305+P351+P338-P310 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. | | | | |
| | P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. | | | | |
| | P273-P501a | Avoid release to the environment. Dispose of contents/container in accordance with local regulations. | | | | |



HEAT RESISTANT SILVER
Code: AE0140204



Supplementary statements:

None.

Substances that contribute to classification:

Hydrocarbons C6 isoalkanes (n-hexane <5%)

- 2.3 OTHER HAZARDS:
Hazards which do not result in classification but which may contribute to the overall hazards of the mixture:
Other physicochemical hazards: Vapours may form with air a mixture potentially flammable or explosive.
Other adverse human health effects: No other relevant adverse effects are known.
Other negative environmental effects: Does not contain substances that fulfil the PBT/vPvB criteria.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 SUBSTANCES:
Not applicable (mixture).

- 3.2 MIXTURES:
This product is a mixture.
Chemical description:
Aerosol.

HAZARDOUS INGREDIENTS:

Substances taking part in a percentage higher than the exemption limit:

| | | | |
|-----------|---|-------------------------|--|
| 50 < 60 % | Dimethyl ether CAS: 115-10-6 , EC: 204-065-8 CLP: Danger: Flam. Gas 1:H220 Press. Gas:H280 | REACH: 01-2119472128-37 | Index No. 603-019-00-8 < REACH |
| 15 < 20 % | Hydrocarbons, C6, isoalkanes, <5% n-hexane (CAS: 64742-49-0) , List No. 931-254-9 CLP: Danger: Flam. Liq. 2:H225 Skin Irrit. 2:H315 STOT SE (narcosis) 3:H336 Asp. Tox. 1:H304 Aquatic Chronic 2:H411 | REACH: 01-2119484651-34 | Autodassified < REACH |
| 5 < 10 % | Xylene (mixture of isomers) CAS: 1330-20-7 , EC: 215-535-7 CLP: Danger: Flam. Liq. 3:H226 Acute Tox. (inh.) 4:H332 Acute Tox. (skin) 4:H312 Skin Irrit. 2:H315 Eye Irrit. 2:H319 STOT SE (irrit.) 3:H335 STOTRE 2:H373i Asp. Tox. 1:H304 | REACH: 01-2119488216-32 | Index No. 601-022-00-9 < REACH |
| 2,5 < 5 % | Aluminium powder (stabilised) CAS: 7429-90-5 , EC: 231-072-3 CLP: Danger: Flam. Sol. 1:H228 | REACH: 01-2119529243-45 | (Note T) Index No. 013-002-00-1 < REACH / ATP01 |
| 1 < 2 % | Acetone CAS: 67-64-1 , EC: 200-662-2 CLP: Danger: Flam. Liq. 2:H225 Eye Irrit. 2:H319 STOT SE (narcosis) 3:H336 EUH066 | REACH: 01-2119471330-49 | Index No. 606-001-00-8 < REACH / ATP01 |
| 1 < 2 % | Naphtha (petroleum), hydrotreated heavy CAS: 64742-48-9 , EC: 265-150-3 CLP: Danger: Asp. Tox. 1:H304 | | (Note P) Index No. 649-327-00-6 < ATP01 |
| 1 < 2 % | Hydrocarbons C9 aromatics (CAS: 64742-95-6) , List No. 918-668-5 CLP: Danger: Flam. Liq. 3:H226 STOT SE (irrit.) 3:H335 STOTS E (narcosis) 3:H336 Asp. Tox. 1:H304 Aquatic Chronic 2:H411 EUH066 | REACH: 01-2119455851-35 | Autodassified < REACH |

Impurities:

Content of benzene < 0.1%.

Stabilizers:

None

Reference to other sections:

For more information on hazardous ingredients, see sections 8, 11, 12 and 16.

SUBSTANCES OF VERY HIGH CONCERN (SVHC):

List updated by ECHA on 27/06/2018.

Substances SVHC subject to authorisation, included in Annex XIV of Regulation (EC) no. 1907/2006:

None

Substances SVHC candidate to be included in Annex XIV of Regulation (EC) no. 1907/2006:

None

PERSISTENT, BIOACCUMULABLE AND TOXIC PBT, OR VERY PERSISTENT AND VERY BIOACCUMULABLE VPvB SUBSTANCES:

Does not contain substances that fulfil the PBT/vPvB criteria.



HEAT RESISTANT SILVER
Code: AE0140204



SECTION 4 : FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST-AID MEASURES:



Symptoms may occur after exposure, so that in case of direct exposure to the product, when in doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Lifeguards should pay attention to self-protection and use the recommended protective equipment if there is a possibility of exposure. Wear protective gloves when administering first aid.

| Route of exposure | Symptoms and effects, acute and delayed | Description of first-aid measures |
|------------------------|---|---|
| <u>Inhalation:</u> | Inhalation of solvent vapours may produce headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness. | Remove the patient out of the contaminated area into the fresh air. If breathing is irregular or stops, administer artificial respiration. If the person is unconscious, place in appropriate recovery position. Keep the patient warm and at rest until medical attention arrives. |
| <u>Skin:</u> | Skin contact causes redness. Prolonged contact may cause skin dryness. | Remove immediately contaminated clothing. Wash thoroughly the affected area with plenty of cold or lukewarm water and neutral soap, or use a suitable skin cleanser. Do not use solvents or thinners. |
| <u>Eyes:</u> | Contact with the eyes produces redness and pain. | Remove contact lenses. Rinse eyes copiously by irrigation with plenty of clean, fresh water for at least 15 minutes, holding the eyelids apart, until the irritation is reduced. If irritation persists, consult a physician. |
| <u>Ingestion:</u> | If swallowed, may cause irritation of the throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea. | If swallowed, seek medical advice immediately and show container or label. Do not induce vomiting. Keep the patient at rest. |

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

The main symptoms and effects are indicated in sections 4.1 and 11

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Notes to physician: Treatment should be directed at the control of symptoms and the clinical condition of the patient.

Antidotes and contraindications: Specific antidote not known.

SECTION 5 : FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Extinguishing powder or CO₂. In the case of more important fires, also alcohol resistant foam and water spray/mist. Do not use for extinguishing: direct water jet. Direct water jet may not be effective to extinguish the fire, since the fire may spread.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Decomposes when heated intensely. Fire can produce a dense black smoke. As consequence of combustion or thermal decomposition, hazardous products may be produced: carbon monoxide, carbon dioxide. Irritant. Exposure to combustion or decomposition products may be a hazard to health.

5.3 ADVICE FOR FIREFIGHTERS:

Special protective equipment: Depending on magnitude of fire, heat-proof protective clothing may be required, appropriate independent breathing apparatus, gloves, protective glasses or face masks and boots. If the fire-proof protective equipment is not available or is not being used, combat fire from a sheltered position or from a safe distance. The standard EN469 provides a basic level of protection for chemical incidents.

Other recommendations: Cool with water the tanks, cisterns or containers close to sources of heat or fire. Bear in mind the direction of the wind. Do not allow fire-fighting residue to enter drains, sewers or water courses.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Eliminate possible sources of ignition and when appropriate, ventilate the area. Do not smoke. Avoid direct contact with this product. Avoid breathing vapours. Keep people without protection in opposition to the wind direction.

6.2 ENVIRONMENTAL PRECAUTIONS:

Avoid contamination of drains, surface or subterranean water and soil. In the case of large scale spills or when the product contaminates lakes, rivers or sewages, inform the appropriate authorities in accordance with local regulations.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Contain and mop up spills with non-combustible absorbent materials (earth, sand, vermiculite, diatomaceous earth, etc.). Avoid use of solvents. Keep the remains in a closed container.

6.4 REFERENCE TO OTHER SECTIONS:

For contact information in case of emergency, see section 1.

For information on safe handling, see section 7.

For exposure controls and personal protection measures, see section 8.

For waste disposal, follow the recommendations in section 13.



HEAT RESISTANT SILVER
Code: AE0140204



SECTION 7 : HANDLING AND STORAGE

- 7.1 **PRECAUTIONS FOR SAFE HANDLING:**
Comply with the existing legislation on health and safety at work.
General recommendations:
Avoid any type of leakage or escape.
Recommendations for the prevention of fire and explosion risks:
Pressurised container. Protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Do not smoke.
- Flash point : # -40* °C
- Autoignition temperature : # 253* °C
- Upper/lower flammability or explosive limits : # 2.8* - 22.0 % Volume 25°C
Recommendations for the prevention of toxicological risks:
Avoid applying the product directly to people, animals, plants or foodstuffs. Do not eat, drink or smoke in application and drying areas. After handling, wash hands with soap and water. For exposure controls and personal protection measures, see section 8.
Recommendations for the prevention of environmental contamination:
Avoid any spillage in the environment. Pay special attention to the cleaning water. In the case of accidental spillage, follow the instructions indicated in section 6.
- 7.2 **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**
Forbid the entry to unauthorized persons. Keep out of reach of children. This product should be stored isolated from heat and electrical sources. Do not smoke in storage area. If possible, avoid direct contact with sunlight. Avoid extreme humidity conditions. For more information, see section 10.
Class of storage : According to current legislation.
Maximum storage period : 24. months
Temperature interval : min: 5. °C, max: 40. °C (recommended).
Incompatible materials:
Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.
Type of packaging:
According to current legislation.
Limit quantity (Seveso III): # Directive 2012/18/EU:
Not applicable (product for non industrial use).
- 7.3 **SPECIFIC END USES:**
For the use of this product do not exist particular recommendations apart from that already indicated.



HEAT RESISTANT SILVER
Code: AE0140204



SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1

CONTROL PARAMETERS:

If a product contains ingredients with exposure limits, may be necessary a personnel monitoring, work place or biological, to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to EN689, EN14042 and EN482 standard concerning methods for assessing the exposure by inhalation to chemical agents, and exposure to chemical and biological agents. Reference should be also made to national guidance documents for methods for the determination of dangerous substances.

OCCUPATIONAL EXPOSURE LIMIT VALUES (TLV) A GCH-2017:

Not established.

BIOLOGICAL LIMIT VALUES:

Not available

DERIVED NO-EFFECT LEVEL (DNEL):

Derived no-effect level (DNEL) is a level of exposure that is considered safe, derived from toxicity data according to specific guidances included in REACH. DNEL values may differ from a occupational exposure limit (OEL) for the same chemical. OEL values may come recommended by a particular company, a government regulatory agency or an organization of experts. Although considered protective of health, the OEL values are derived by a process different of REACH.

Derived no-effect level, workers:

- Systemic effects, acute and chronic:

Dimethyl ether

Hydrocarbons C6 isoalkanes (n-hexane <5%)

Xylene (mixture of isomers)

Aluminium powder (stabilised)

Acetone

Hydrocarbons C9 aromatics

DNEL Inhalation

mg/m3

- (a) 1894. (c)
- (a) 5306. (c)
289. (a) 77.0 (c)
- (a) - (c)
- (a) 1210. (c)
- (a) 150. (c)

DNEL Cutaneous

mg/kg bw/d

- (a) - (c)
- (a) 13964. (c)
s/r (a) 180. (c)
- (a) - (c)
- (a) 186. (c)
- (a) 25.0 (c)

DNEL Oral

mg/kg bw/d

- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)

Derived no-effect level, workers:

- Local effects, acute and chronic:

Dimethyl ether

Hydrocarbons C6 isoalkanes (n-hexane <5%)

Xylene (mixture of isomers)

Aluminium powder (stabilised)

Acetone

Hydrocarbons C9 aromatics

DNEL Inhalation

mg/m3

- (a) - (c)
- (a) - (c)
289. (a) s/r (c)
- (a) 3.72 (c)
2420. (a) - (c)
- (a) - (c)

DNEL Cutaneous

mg/cm2

- (a) - (c)
- (a) - (c)
s/r (a) s/r (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)

DNEL Eyes

mg/cm2

- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)

Derived no-effect level, general population:

- Systemic effects, acute and chronic:

Dimethyl ether

Hydrocarbons C6 isoalkanes (n-hexane <5%)

Xylene (mixture of isomers)

Aluminium powder (stabilised)

Acetone

Hydrocarbons C9 aromatics

DNEL Inhalation

mg/m3

- (a) 471. (c)
- (a) 1131. (c)
174. (a) 14.8 (c)
- (a) - (c)
- (a) 200. (c)
- (a) 32.0 (c)

DNEL Cutaneous

mg/kg bw/d

- (a) - (c)
- (a) 1377. (c)
s/r (a) 108. (c)
- (a) - (c)
- (a) 62.0 (c)
- (a) 11.0 (c)

DNEL Oral

mg/kg bw/d

- (a) - (c)
- (a) 1301. (c)
s/r (a) 1.60 (c)
- (a) - (c)
- (a) 62.0 (c)
- (a) 11.0 (c)

Derived no-effect level, general population:

- Local effects, acute and chronic:

Dimethyl ether

Hydrocarbons C6 isoalkanes (n-hexane <5%)

Xylene (mixture of isomers)

Aluminium powder (stabilised)

Acetone

Hydrocarbons C9 aromatics

DNEL Inhalation

mg/m3

- (a) - (c)
- (a) - (c)
174. (a) s/r (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)

DNEL Cutaneous

mg/cm2

- (a) - (c)
- (a) - (c)
s/r (a) s/r (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)

DNEL Eyes

mg/cm2

- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)
- (a) - (c)

(a) - Acute, short-term exposure, (c) - Chronic, long-term or repeated exposure.

(-) - DNEL not available (without data of registration REACH).

s/r - DNEL not derived (not identified hazard).



HEAT RESISTANT SILVER
Code: AE0140204



PREDICTED NO-EFFECT CONCENTRATION (PNEC):

Predicted no-effect concentration, aquatic organisms:

- Fresh water, marine water and intermittent release:

| | <u>PNEC Fresh water</u> mg/l | <u>PNEC Marine</u> mg/l | <u>PNEC Intermittent</u> mg/l |
|---|---------------------------------|----------------------------|----------------------------------|
| Dimethyl ether | 0.155 | 0.0160 | 1.55 |
| Hydrocarbons C6 isoalkanes (n-hexane <5%) | - | - | - |
| Xylene (mixture of isomers) | 0.327 | 0.327 | 0.327 |
| Aluminium powder (stabilised) | 0.0749 | - | - |
| Acetone | 10.6 | 1.06 | 21.0 |
| Hydrocarbons C9 aromatics | uvcb | uvcb | uvcb |

- Wastewater treatment plants (STP) and sediments in fresh- and marine water:

| | <u>PNEC STP</u> mg/l | <u>PNEC Sediments</u> mg/kg dry weight | <u>PNEC Sediments</u> mg/kg dry weight |
|---|-------------------------|---|---|
| Dimethyl ether | 160. | 0.681 | 0.0690 |
| Hydrocarbons C6 isoalkanes (n-hexane <5%) | - | - | - |
| Xylene (mixture of isomers) | 6.58 | 12.5 | 12.5 |
| Aluminium powder (stabilised) | 20.0 | - | - |
| Acetone | 100. | 30.4 | 3.04 |
| Hydrocarbons C9 aromatics | uvcb | uvcb | uvcb |

Predicted no-effect concentration, terrestrial organisms:

- Air, soil and effects for predator sand humans:

| | <u>PNEC Air</u> mg/m3 | <u>PNEC Soil</u> mg/kg dry weight | <u>PNEC Oral</u> mg/kg bw/d |
|---|--------------------------|--------------------------------------|--------------------------------|
| Dimethyl ether | - | 0.0450 | - |
| Hydrocarbons C6 isoalkanes (n-hexane <5%) | - | - | - |
| Xylene (mixture of isomers) | - | 2.31 | - |
| Aluminium powder (stabilised) | - | - | - |
| Acetone | - | 29.5 | n/b |
| Hydrocarbons C9 aromatics | uvcb | uvcb | uvcb |

(-) - PNEC not available (without data of registration REACH).

n/b - PNEC not derived (not bioaccumulative potential).

uvcb - The substance has an unknown or variable composition (UVCB). The conventional methods to derive the PNEC are not appropriate and it is not possible to identify a single PNEC representative for these substances, and therefore not used in calculations for risk assessment.

8.2 EXPOSURE CONTROLS:

ENGINEERING MEASURES:



Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these measures are not sufficient to maintain concentrations of particulates and vapours below the Occupational Exposure Limits, suitable respiratory protection must be worn.

Protection of respiratory system: Avoid the inhalation of vapours.

Protection of eyes and face: It is recommended to install water taps or sources with clean water close to the working area.

Protection of hands and skin: It is recommended to install water taps or sources with clean water close to the working area. Barrier creams may help to protect the exposed areas of the skin. Barrier creams should not be applied once exposure has occurred.

OCCUPATIONAL EXPOSURE CONTROLS: Directive 89/686/EEC-96/58/EC:

As a general measure on prevention and safety in the work place, we recommend the use of a basic personal protection equipment (PPE), with the corresponding EC marking. For more information on personal protective equipment (storage, use, cleaning, maintenance, type and characteristics of the PPE, protection class, marking, category, CEN norm, etc.), you should consult the informative brochures provided by the manufacturers of PPE.

Mask:



Suitable combined filter mask for gases, vapours and particles (EN14387/EN143). Class 1: low capacity up to 1000 ppm, Class 2: medium capacity up to 5000 ppm, Class 3: high capacity up to 10000 ppm. In order to obtain a suitable protection level, the filter class must be selected depending on the type and concentration of the contaminating agents present, in accordance with the specifications supplied by the filter producers. The respiratory equipment with filters does not work satisfactorily when the air contains high concentrations of vapour or oxygen content less than 18% in volume.

Safety goggles:



Safety goggles with suitable lateral protection (EN166). Clean daily and disinfect at regular intervals in accordance with the instructions of the manufacturer.

Face shield:

No.

Gloves:



Gloves resistant against chemicals (EN374). There are several factors (for example, temperature), they do in practice the period of use of a protective gloves resistant against chemicals is clearly lower than the established standard EN374. Due to the wide variety of circumstances and possibilities, the instructions/specifications provided by the glove supplier should be taken into account. The gloves should be immediately replaced when any sign of degradation is noted.

Boots:

No.

Apron:

No.

Clothing:

No.

Thermal hazards:

Not applicable (the product is handled at room temperature).

ENVIRONMENTAL EXPOSURE CONTROLS:

Avoid any spillage in the environment. Avoid any release into the atmosphere.



HEAT RESISTANT SILVER
Code: AE0140204



Spills on the soil: Prevent contamination of soil.

Spills in water: Harmful to aquatic organisms. May cause long-term adverse effects on the aquatic environment. Do not allow to escape into drains, sewers or water courses.

- **Water Management Act:** # This product does not contain any substance included in the list of priority substances in the field of water policy under Directive 2000/60/EC-2013/39/EU.

Emissions to the atmosphere: Because of volatility, emissions to the atmosphere while handling and use may result. When possible, avoid solvent release to the atmosphere; do not pulverize more than is strictly necessary.

- **VOC (industrial installations):** # If this product is used in an industrial installation, it must be verified if it is applicable the Directive 2010/75/EC, on the limitation of emissions of volatile compounds due to the use of organic solvents in certain activities and installations: Solvents : 89.3% Weight, VOC (supply) : 89.3% Weight, VOC : 57.4% C (expressed as carbon), Molecular weight (average) : 64.0, Number C atoms (average) : 3.4.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Appearance

- Physical state : Aerosol.
- Colour : Silver.
- Odour : Characteristic.
- Odour threshold : Not available (mixture).

pH-value

- pH : Not applicable (non-aqueous media).

Change of state

- Melting point : Not applicable (mixture).
- Initial boiling point : Not applicable

Density

- Vapour density : Not available
- Relative density : # 0.726* at 20/4°C Relative water

Stability

- Decomposition temperature : # Not available (technical impossibility to obtain the data).

Viscosity:

- Viscosity (flow time) : Not applicable

Volatility:

- Evaporation rate : Not applicable
- Vapour pressure : Not available

Solubility(ies)

- Solubility in water : Not applicable
- Liposolubility : Not applicable
- Partition coefficient: n-octanol/water : Not applicable (mixture).

Flammability:

- Flash point : # -40* °C
- Upper/lower flammability or explosive limits : # 2.8* - 22.0 % Volume 25°C
- Autoignition temperature : # 253* °C

Explosive properties:

Vapours can form explosive mixtures with air and are able to flame up or explode in presence of an ignition source.

Oxidizing properties:

Not classified as oxidizing product.

*Estimated values based on the substances composing the mixture.

9.2 OTHER INFORMATION:

- Heat of combustion : # 8827* Kcal/kg
- Solids : # 10.7 % Weight
- VOC (supply) : # 89.3 % Weight
- VOC (supply) : # 648.8 g/l

The values indicated do not always coincide with product specifications. The data for the product specifications can be found in the corresponding technical data sheet. For additional information concerning physical and chemical properties related to safety and environment, see sections 7 and 12.

SECTION 10 : STABILITY AND REACTIVITY

10.1 REACTIVITY:

Corrosivity to metals: It is not corrosive to metals.

Pyrophorical properties: It is not pyrophoric.

10.2 CHEMICAL STABILITY:

Stable under recommended storage and handling conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

Possible dangerous reaction with reducing agents, oxidizing agents, acids, alkalis, amines, peroxides.

10.4 CONDITIONS TO AVOID:

Heat: Keep away from sources of heat.

Light: If possible, avoid direct contact with sunlight.

Air: # The product is not affected by exposure to air, but should not be left the containers open.

Humidity: Avoid extreme humidity conditions.

Pressure: # Not relevant.

Shock: # The product is not sensitive to shocks, but as a recommendation of a general nature should be avoided bumps and rough handling to avoid dents and breakage of packaging, especially when the product is handled in large quantities, and during loading and download operations.

10.5 INCOMPATIBLE MATERIALS:

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.



HEAT RESISTANT SILVER
Code: AE0140204



10.6 **HAZARDOUS DECOMPOSITION PRODUCTS:**
As consequence of thermal decomposition, hazardous products may be produced: carbon monoxide.

SECTION 11 : TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation is available. The toxicological classification for these mixture has been carried out by using the conventional calculation method of the Regulation (EU) No. 1272/2008~2017/776 (CLP).

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

ACUTE TOXICITY:

Dose and lethal concentrations for individual ingredients :

| | DL50 (OECD 401) mg/kg oral | DL50 (OECD 402) mg/kg cutaneous | CL50 (OECD 403) mg/m3.4h inhalation |
|---|-------------------------------|------------------------------------|--|
| Dimethyl ether | | | > 100000 Rat |
| Hydrocarbons C6 isoalkanes (n-hexane <5%) | > 5000. Rat | 3350. Rat | > 20000. Rat |
| Xylene (mixture of isomers) | 4300. Rat | 1700. Rabbit | > 22080. Rat |
| Aluminium powder (stabilised) | 15900. Rat | | > 888. Rat |
| Acetone | 5800. Rat | 15800. Rabbit | > 76000. Rat |
| Naphtha (petroleum), hydrotreated heavy | 15000. Rat | 3000. Rabbit | |
| Hydrocarbons C9 aromatics | 3592. Rat | 3160. Rabbit | > 6193. Rat |

No observed adverse effect level

Not available

Lowest observed adverse effect level

Not available

INFORMATION ON LIKELY ROUTES OF EXPOSURE : Acute toxicity:

| Routes of exposure | Acute toxicity | Cat. | Main effects, acute and/or delayed | Criteria |
|--------------------------------------|-------------------|------|--|--------------|
| <u>Inhalation:</u> Not classified | ATE > 20000 mg/m3 | - | Not classified as a product with acute toxicity if inhaled (based on available data, the classification criteria are not met). | CLP 3.1.3.6. |
| <u>Skin:</u> Not classified | ATE > 2000 mg/kg | - | Not classified as a product with acute toxicity in contact with skin (based on available data, the classification criteria are not met). | CLP 3.1.3.6. |
| <u>Eyes:</u> Not classified | Not available | - | Not classified as a product with acute toxicity by eye contact (lack of data). | CLP 1.2.5. |
| <u>Ingestion:</u> Not classified | ATE > 5000 mg/kg | - | Not classified as a product with acute toxicity if swallowed (based on available data, the classification criteria are not met). | CLP 3.1.3.6. |

CLP 3.1.3.6: Classification of mixtures based on ingredients of the mixture (additivity formula).

CORROSION / IRRITATION / SENSITISATION :

| Danger class | Target organs | Cat. | Main effects, acute and/or delayed | Criteria |
|--|---------------|-------|---|------------------------|
| <u>Respiratory corrosion/irritation:</u> Not classified | - | - | Not classified as a product corrosive or irritant by inhalation (based on available data, the classification criteria are not met). | CLP 1.2.6. 3.8.3.4. |
| <u>Skin corrosion/irritation:</u> | Skin | Cat.2 | IRRITANT: Causes skin irritation. | CLP 3.2.3.3. |
| <u>Serious eye damage/irritation:</u> | Eyes | Cat.2 | IRRITANT: Causes serious eye irritation. | CLP 3.3.3.3. |
| <u>Respiratory sensitisation:</u> Not classified | - | - | Not classified as a product sensitising by inhalation (based on available data, the classification criteria are not met). | CLP 3.4.3.3. |
| <u>Skin sensitisation:</u> Not classified | - | - | Not classified as a product sensitising by skin contact (based on available data, the classification criteria are not met). | CLP 3.4.3.3. |

CLP 3.2.3.3: Classification of the mixture when data are available for all components or only for some components.

CLP 3.3.3.3: Classification of the mixture when data are available for all components or only for some components.

CLP 3.4.3.3: Classification of the mixture when data are available for all components or only for some components.

ASPIRATION HAZARD:

| Danger class | Target organs | Cat. | Main effects, acute and/or delayed | Criteria |
|---|---------------|------|------------------------------------|---------------|
| <u>Aspiration hazard:</u> Not classified | - | - | Not applicable. | CLP 3.10.3.3. |

CLP 3.10.3.3: Classification of the mixture when data are available for all components or only for some components.



HEAT RESISTANT SILVER
Code: AE0140204



SPECIFIC TARGET ORGANS TOXICITY (STOT): Single exposure (SE) and/or Repeated exposure (RE):

| Effects | SE/RE | Target organs | Cat. | Main effects, acute and/or delayed | Criteria |
|--------------------------|-------|---------------|-------|--|--------------|
| <u>Cutaneous:</u> | RE | Skin | - | DEFATTENING: Repeated exposure may cause skin dryness or cracking. | CLP 1.2.4. |
| <u>Neurological:</u> | SE | CNS | Cat.3 | NARCOSIS: May cause drowsiness or dizziness if inhaled. | CLP 3.8.3.4. |

CLP 3.8.3.4: Classification of the mixture when data are available for all components or only for some components.

CMR EFFECTS:

Carcinogenic effects: It is not considered as a carcinogenic product.

Genotoxicity: It is not considered as a mutagenic product.

Toxicity for reproduction: Does not harm fertility. Does not harm the unborn child.

Effects via lactation: Not classified as a hazardous product for children breast-fed.

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE:

Routes of exposure: May be absorbed by inhalation of vapour, through the skin and by ingestion.

Short-term exposure: Exposure to solvent vapour concentrations in excess of the stated occupational exposure limit, may result in adverse health effects, such as mucous membrane and respiratory system irritation and adverse effects on kidneys, liver and central nervous system. Liquid splashes in the eyes may cause irritation and reversible damage. If swallowed, may cause irritation of the throat; other effects may be the same as described in the exposure to vapours.

Long-term or repeated exposure: Repeated or prolonged contact may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated exposure may cause skin dryness or cracking.

INTERACTIVE EFFECTS:

Not available.

INFORMATION ABOUT TOXICOCINETICS, METABOLISM AND DISTRIBUTION:

Dermal absorption: Not available.

Basic toxicokinetics: Not available.

ADDITIONAL INFORMATION:

Not available.

SECTION 12 : ECOLOGICAL INFORMATION

No experimental ecotoxicological data on the preparation as such is available. The ecotoxicological classification for these mixture has been carried out by using the conventional calculation method of the Regulation (EU) No. 1272/2008–2017/776 (CLP).

| 12.1 | <u>TOXICITY:</u> | <u>CL50 (OECD 203)</u> | <u>CE50 (OECD 202)</u> | <u>CE50 (OECD 201)</u> |
|--|---|------------------------|------------------------|------------------------|
| | | mg/L.96hours | mg/L.48hours | mg/L.72hours |
| <u>Acute toxicity in aquatic environment for individual ingredients:</u> | | | | |
| | Dimethyl ether | 4100. Fishes | 4400. Daphnia | |
| | Hydrocarbons C6 isoalkanes (n-hexane <5%) | 18. Fishes | 3.9 Daphnia | 14. Algae |
| | Xylene (mixture of isomers) | 14. Fishes | 16. Daphnia | > 10. Algae |
| | Acetone | 5540. Fishes | 12100. Daphnia | |
| | Naphtha (petroleum), hydrotreated heavy | 750. Fishes | > 100. Daphnia | 400. Algae |
| | Hydrocarbons C9 aromatics | 9.2 Fishes | 3.2 Daphnia | 2.9 Algae |

No observed effect concentration

Not available




Lowest observed effect concentration

Not available

| 12.2 | <u>PERSISTENCE AND DEGRADABILITY:</u> | <u>DQO</u> | <u>%DBO/DQO</u> | <u>Biodegradability</u> |
|---|---|------------|------------------------|-------------------------|
| | | mgO2/g | 5 days 14 days 28 days | |
| Not available. | | | | |
| <u>Aerobic biodegradation for individual ingredients:</u> | | | | |
| | Dimethyl ether | 1041. | ~ 1. ~ 3. ~ 5. | Not easy |
| | Hydrocarbons C6 isoalkanes (n-hexane <5%) | | | Easy |
| | Xylene (mixture of isomers) | 2620. | ~ 52. ~ 81. ~ 88. | Easy |
| | Acetone | 1920. | ~ 91. | Easy |
| | Naphtha (petroleum), hydrotreated heavy | | | Easy |
| | Hydrocarbons C9 aromatics | 3195. | | Easy |

Note: Biodegradability data correspond to an average of data from various bibliographic sources.

| 12.3 | <u>BIOACCUMULATIVE POTENTIAL:</u> | <u>logPow</u> | <u>BCF</u> | <u>Potential</u> |
|--|---|---------------|---------------------|------------------|
| | | | L/kg | |
| Not available. | | | | |
| <u>Bioaccumulation for individual ingredients:</u> | | | | |
| | Dimethyl ether | 0.0700 | 1.7 (calculated) | Not available |
| | Hydrocarbons C6 isoalkanes (n-hexane <5%) | 3.60 | | Not available |
| | Xylene (mixture of isomers) | 3.16 | 57. (calculated) | Not available |
| | Acetone | -0.240 | 3.2 (calculated) | Not available |
| | Naphtha (petroleum), hydrotreated heavy | 5.65 | > 100. (calculated) | Not available |
| | Hydrocarbons C9 aromatics | 3.30 | 70. (calculated) | Not available |

|  HEAT RESISTANT SILVER Code: AE0140204 | |   |
|---|--|---|
| 12.4 | MOBILITY IN SOIL: Not available. | |
| 12.5 | RESULTS OF PBT AND VPVBASSESSMENT: Annex XIII of Regulation (EC) no. 1907/2006: Does not contain substances that fulfil the PBT/vPvB criteria. | |
| 12.6 | OTHER ADVERSE EFFECTS: Ozone depletion potential: Not available. Photochemical ozone creation potential: Not available. Earth global warming potential: In case of fire or incineration liberates CO2. Endocrine disrupting potential: Not available. | |
| SECTION 13 : DISPOSAL CONSIDERATIONS | | |
| 13.1 | WASTE TREATMENT METHODS: # <i>Directive 2008/98/EC~Regulation (EU) no. 1357/2014:</i> Take all necessary measures to prevent the production of waste whenever possible. Analyse possible methods for revaluation or recycling. Do not discharge into drains or the environment, dispose at an authorised waste collection point. Waste should be handled and disposed in accordance with current local and national regulations. For exposure controls and personal protection measures, see section 8. Disposal of empty containers: # <i>Directive 94/62/EC~2015/720/EU, Decision 2000/532/EC~2014/955/EU:</i> Emptied containers and packaging should be disposed in accordance with currently local and national regulations. The classification of packaging as hazardous waste will depend on the degree of emptying of the same, being the holder of the residue responsible for their classification, in accordance with Chapter 15 01 of Decision 2000/532/EC, and forwarding to the appropriate final destination. With contaminated containers and packaging, adopt the same measures as for the product in itself. Ensure the container is completely empty before throwing it away. Procedures for neutralising or destroying the product: In accordance with local regulations. Do not incinerate closed containers. | |



HEAT RESISTANT SILVER
Code: AE0140204



SECTION 14 : TRANSPORT INFORMATION

14.1 UN NUMBER: 1950

14.2 UN PROPER SHIPPING NAME:
AEROSOLS

14.3 TRANSPORT HAZARD CLASS(ES) AND PACKING GROUP:

14.4

Transport by road (ADR 2017) and
Transport by rail (RID 2017):

| | |
|----------------------------|------------------------------------|
| - Class: | 2 |
| - Packaging group: | - |
| - Classification code: | 5F |
| - Tunnel restriction code: | (D) |
| - Transport category: | 2 , max. ADR 1.1.3.6. 333 L |
| - Limited quantities: | 1 L (see total exemptions ADR 3.4) |
| - Transport document: | Consignment paper. |
| - Instructions in writing: | ADR 5.4.3.4 |

Transport by sea (IMDG 38-16):

| | |
|---------------------------|--------------------------|
| - Class: | 2 (Division 2.1) |
| - Packaging group: | - |
| - Emergency Sheet (EmS): | F-D,S-U |
| - First Aid Guide (MFAG): | 620* |
| - Marine pollutant: | No. |
| - Transport document: | Shipping Bill of lading. |

Transport by air (ICAO/IATA 2017):

| | |
|-----------------------|---------------------|
| - Class: | 2 (Division 2.1) |
| - Packaging group: | - |
| - Transport document: | Air Bill of lading. |

Transport by inland waterways (ADN):

Not available.

14.5 ENVIRONMENTAL HAZARDS:

Not applicable.

14.6 SPECIAL PRECAUTIONS FOR USER:

Ensure that persons transporting the product know what to do in case of accident or spill. Always transport in closed containers that are upright and secure. Ensure adequate ventilation.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:

Not applicable.

SECTION 15 : REGULATORY INFORMATION

15.1 EU SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC:

The regulations applicable to this product generally are listed throughout this Safety Data Sheet.

Restrictions on manufacture, placing on market and use: See section 1.2

Tactile warning of danger: Not applicable (the classification criteria are not met).

Child safety protection: Not applicable (the classification criteria are not met).

Specific legislation on aerosols:

It is applicable the Directive 75/324/EEC~2013/10/EU, relating to aerosol dispensers and the Directive 87/404/EEC, concerning simple pressure packages.

OTHER REGULATIONS:

Control of the risks inherent in major accidents (Seveso III): See section 7.2

Other local legislations:

The receiver should verify the possible existence of local regulations applicable to the chemical.

15.2 CHEMICAL SAFETY ASSESSMENT:

A chemical safety assessment has not been carried out for this mixture.



HEAT RESISTANT SILVER
Code: AE0140204



SECTION 16 : OTHER INFORMATION

TEXT OF THE PHRASES AND NOTES REFERENCED IN SECTIONS 2 AND/OR 3:Hazard statements according the Regulation (EU) No. 1272/2008-2017/776 (CLP), Annex III:

H220 Extremely flammable gas. H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H228 Flammable solid. 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. H411 Toxic to aquatic life with long lasting effects. EUH066 Repeated exposure may cause skin dryness or cracking. H373i May cause damage to organs through prolonged or repeated exposure if inhaled.

Notes related to the identification, classification and labelling of the substances:

Note P : The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1% w/w benzene (EC No. 200-753-7).

Note T : This substance may be marketed in a form which does not have the physico-chemical properties as indicated by the classification in the Annex I entry.

ADVICES ON ANY TRAINING APPROPRIATE FOR WORKERS:

It is recommended for all staff that will handle this product to carry out a basic training in occupational risk and prevention, in order to provide understanding and interpretation of Safety Data Sheets and labelling of products as well.

MAIN LITERATURE REFERENCES AND SOURCES FOR DATA:

- European Chemicals Agency: ECHA, <http://echa.europa.eu/>
- Access to European Union Law, <http://eur-lex.europa.eu/>
- Industrial Solvents Handbook, Ibert Mellan (Noyes Data Co., 1970).
- European agreement on the international carriage of dangerous goods by road, (ADR 2017).
- International Maritime Dangerous Goods Code IMDG including Amendment 38-16 (IMO, 2016).

ABBREVIATIONS AND ACRONYMS:

List of abbreviations and acronyms that can be used (but not necessarily used) in this Safety Data Sheet:

- REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals of the United Nations.
- CLP: European regulation on Classification, Labelling and Packaging of substances and chemical mixtures.
- EINECS: European Inventory of Existing Commercial Chemical Substances.
- ELINCS: European List of Notified Chemical Substances.
- CAS: Chemical Abstracts Service (Division of the American Chemical Society).
- UVCB: Substances of Unknown or Variable composition, complex reaction products or biological materials.
- SVHC: Substances of Very High Concern.
- PBT: Persistent, bioaccumulable and toxic substances.
- vPvB: Very persistent and very bioaccumulable substances.
- VOC: Volatile Organic Compounds.
- DNEL: Derived No-Effect Level (REACH).
- PNEC: Predicted No-Effect Concentration (REACH).
- LD50: Lethal dose, 50 percent.
- LC50: Lethal concentration, 50 percent.
- UN: United Nations Organisation.
- ADR: European agreement concerning the international carriage of dangerous goods by road.
- RID: Regulations concerning the international transport of dangerous goods by rail.
- IMDG: International Maritime code for Dangerous Goods.
- IATA: International Air Transport Association.
- ICAO: International Civil Aviation Organization.

SAFETY DATA SHEET REGULATIONS:

Safety Data Sheet in accordance with Article 31 of Regulation (EC) No. 1907/2006 (REACH) and Annex of Regulation (EU) No. 2015/830.

HISTORIC:

Version: 6
Version: 7

Revision:

02/12/2015
09/05/2017

Changes since previous Safety Data Sheet:

Legislative, contextual, numerical, methodological and normative changes since the previous version of the present Safety Data Sheet are identified by a red-italic hash (#).

The information of this Safety Data Sheet, is based on the present state of knowledge and on current UE and national laws, as the users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified, without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this Safety Data Sheet is meant as a description of the safety requirements of the product and it is not to be considered as a guarantee of the product's properties.