SAFETY DATA SHEET

Zinc Spray

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier : Zinc Spray

Product code : 110000

Color : Silver.

Other means of identification : Not available.

Product type : Aerosol.

Recommended use of the chemical and restrictions on use

Identified uses

Aerosol product

Restrictions on use

Not applicable.

Supplier's details : 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

Emergency 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

Classification of the substance or mixture : AEROSOLS - Category 1
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.5%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements

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.
P260 - Do not breathe dust or mist.
P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves. Wear eye or face protection.

Response : P391 - Collect spillage.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P317 - If skin irritation occurs: Get medical help.
P337 + P317 - If eye irritation persists: Get medical help.
P319 - Get medical help if you feel unwell.

Storage : P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : P501 - Dispose of waste according to applicable legislation.

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

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	Identifiers
xylene	≤10	CAS: 1330-20-7 EC: 215-535-7
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	≤10	EC: 918-481-9
acetone	≤5.7	CAS: 67-64-1 EC: 200-662-2
ethyl acetate	≤5.7	CAS: 141-78-6 EC: 205-500-4
n-butyl acetate	≤5.7	CAS: 123-86-4 EC: 204-658-1
butan-1-ol	≤2.8	CAS: 71-36-3 EC: 200-751-6

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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 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 following exposure or if feeling unwell. 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 : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. 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 following exposure or if feeling unwell. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

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

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : 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 toxic 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 thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

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.

Section 6. Accidental release measures

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.

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".

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. Collect spillage.

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.

Section 6. Accidental release measures

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.

Section 7. Handling and storage

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 breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. 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.

Conditions for safe storage, including any incompatibilities : 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. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
xylene	**DOL OEL (South Africa, 3/2021) [xylene, o-, m-, p- or mixed isomers]** Absorbed through skin. TWA 8 hours: 200 ppm. STEL 15 minutes: 300 ppm.
acetone	**DOL OEL (South Africa, 3/2021)** TWA 8 hours: 500 ppm. STEL 15 minutes: 1000 ppm.
ethyl acetate	**DOL OEL (South Africa, 3/2021)** TWA 8 hours: 800 ppm.
n-butyl acetate	**DOL OEL (South Africa, 3/2021)** TWA 8 hours: 100 ppm. STEL 15 minutes: 300 ppm.

Biological exposure indices

Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
xylene	**DOL BEI (South Africa, 3/2021) [xylenes]** BEI: 1.5 g/g creatinine, methylhippuric acid [in urine]. Sampling time: end of shift.
acetone	**DOL BEI (South Africa, 3/2021)** BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, 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.

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.

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.

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

Section 9. Physical and chemical properties

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

Appearance

Physical state : Gas. [Aerosol]

Color : Silver.

Odor : Solvent. Sweetish.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : -24°C (-11.2°F)

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not available.

Flammability : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Flammable in the presence of the following materials or conditions: shocks and mechanical impacts.

Lower and upper explosion limit/flammability limit : Not available.

Vapor pressure : Not available.

Relative vapor density : Not available.

Relative density : Not applicable.

Density : 0.86 g/cm³

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : Not available.

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Heat of combustion : 31.48 kJ/g

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Aerosol product

Type of aerosol : Spray

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
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
acetone	**Rat - Oral - LD50** 5800 mg/kg Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor
ethyl acetate	**Rat - Oral - LD50** 5620 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
butan-1-ol	**Rat - Oral - LD50** 790 mg/kg Toxic effects: Liver - Fatty liver degeneration Kidney, Ureter, and Bladder - Other changes Blood - Other changes **Rabbit - Dermal - LD50** 3400 mg/kg **Rat - Inhalation - LC50 Vapor** 24000 mg/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Skin corrosion/irritation

Product/ingredient name	Result
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 %
acetone	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Mild irritant** Amount/concentration applied: 395 mg
butan-1-ol	**Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
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
acetone	**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 **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 20 mg
butan-1-ol	**Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.005 Ml **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 1.62 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Section 11. Toxicological information

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	Result
xylene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
acetone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
ethyl acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
n-butyl acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
butan-1-ol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
xylene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Section 11. Toxicological information

Ingestion : No known significant effects or critical hazards.

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

Skin contact : Adverse symptoms may include the following:
irritation
redness

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 : May cause damage to organs through prolonged or repeated exposure.

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.

Numerical measures of toxicity

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)
Zinc Spray	32761.3	16305.7	N/A	163.1	N/A
xylene	N/A	1100	N/A	11	N/A
acetone	5800	N/A	N/A	N/A	N/A
ethyl acetate	5620	N/A	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	N/A	N/A
butan-1-ol	790	3400	N/A	24	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
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
acetone	**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

Section 12. Ecological information

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
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

Section 12. Ecological information

	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* 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
ethyl acetate	**Acute - LC50 - Fresh water** Daphnia - Water flea - *Daphnia cucullata* Age: 11 days 154 mg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Indian catfish - *Heteropneustes fossilis* Size: 14.16 cm; Weight: 25.54 g 212.5 mg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Algae - Green algae - *Selenastrum sp.* 2500 mg/l [96 hours] Effect: Population **Chronic - NOEC - Fresh water** Fish - Fathead minnow - *Pimephales promelas* - Embryo Age: <24 hours 75.6 mg/l [32 days] Effect: Mortality **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: ≤24 hours 2.4 mg/l [21 days] Effect: Mortality
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
butan-1-ol	**Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas*

Section 12. Ecological information

Age: 33 days; Size: 20.6 mm; Weight: 0.119 g
1730 mg/l [96 hours]
Effect: Mortality
Acute - EC50 - Fresh water
Daphnia - Water flea - *Daphnia magna*
Age: 6 to 24 hours
1983 mg/l [48 hours]
Effect: Intoxication

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	3.12	8.1 to 25.9	Low
acetone	-0.23	-	Low
ethyl acetate	0.68	30	Low
n-butyl acetate	2.3	-	Low
butan-1-ol	1	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

	UN	IMDG	IATA
UN number	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS (Zinc powder - zinc dust (stabilized))	Aerosols, flammable (Zinc powder - zinc dust (stabilized))

Section 14. Transport information

Transport hazard class(es)	2.1 	2.1 	2.1 
Packing group	-	-	-
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

UN : **Special provisions** 63, 190, 277, 327, 344, 381

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-D, S-U
Special provisions 63, 190, 277, 327, 344, 381, 959

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
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

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

Australia : Not determined.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Section 15. Regulatory information

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : Not determined.

Section 16. Other information

History

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Version : 1.1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Procedure used to derive the classification

Classification	Justification
AEROSOLS - Category 1	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

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