

SECTION 4. ----- FIRST-AID MEASURES-----

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Sodium oxides, Iron oxides

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. ----- HANDLING AND STORAGE-----

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

SECTION 8. - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - -

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

Appearance

| | |
|--------|---------------|
| Form | crystalline |
| Colour | yellow, green |

Safety data

| | |
|--|---|
| pH | 4.5 |
| Melting point/freezing point | Melting point/range: 80 °C (176 °F) |
| Boiling point | No data available |
| Flash point | No data available |
| Ignition temperature | No data available |
| Auto-ignition temperature | 207 °C (405 °F) at 1,013 hPa (760 mmHg) |
| Lower explosion limit | No data available |
| Upper explosion limit | No data available |
| Vapour pressure | No data available |
| Density | 1.78 g/cm ³ at 20 °C (68 °F) |
| Water solubility | 72 g/l at 25 °C (77 °F) - OECD Test Guideline 105 - soluble |
| Partition coefficient: n-octanol/water | No data available |
| Relative vapour density | No data available |
| Odour | odourless |

Odour Threshold No data available
Evaporation rate No data available

SECTION 10. -----STABILITY AND REACTIVITY -----

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), Sodium oxides, Iron oxides

Other decomposition products - No data available

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Acute toxicity

Oral LD50

LD50 Oral - Rat - male and female - > 2,000 mg/kg

Inhalation LC50

LC50 Inhalation - Rat - male and female - 4 h - > 2.75 mg/l

Dermal LD50

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

Other information on acute toxicity

No data available

Skin corrosion/irritation

Skin - Rabbit - No skin irritation - 4 h - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - Rabbit - No eye irritation - OECD Test Guideline 405

Respiratory or skin sensitisation

Mouse - Does not cause skin sensitisation. - OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vitro - Ames test - S. typhimurium - with and without metabolic activation - negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

| | |
|-------------------|---|
| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation. |
| Ingestion | May be harmful if swallowed. |
| Skin | May be harmful if absorbed through skin. May cause skin irritation. |
| Eyes | May cause eye irritation. |

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

No data available

Additional Information

RTECS: AH4900000

SECTION 12. ----- ECOLOGICAL INFORMATION -----

Toxicity

| | |
|---|---|
| Toxicity to fish | static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | Immobilization EC50 - Daphnia magna (Water flea) - 100.9 mg/l - 48 h Method: OECD Test Guideline 202 |
| Toxicity to bacteria | Growth inhibition NOEC - Sludge Treatment - 640 mg/l - 3 h Method: OECD Test Guideline 209 |

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

No data available

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA
Not dangerous goods

SECTION 15. ----- REGULATORY INFORMATION -----

WHMIS Classification

Not Rated

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16. ----- OTHER INFORMATION -----

| | |
|---------------------------------|---------------------------|
| Issuing Date | 13-Aug-2009 |
| Revision Date | 22-Oct-2014 |
| Revision Note | No information available. |
| Recommended Restrictions | No information available |

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.