



I. Product and Company Identification

1.1 Identification of the substance or preparation:

OCS DI-OX MAX-PLUS AND OCS DI-OX MAX-E STABILISED LIQUID CHLORINE DIOXIDE

1.2 Company Identification:

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II. Composition/Information on Ingredients

- 2.1 Chemical Composition: Preparation of Aqueous solution of stabilised buffered chlorine dioxide sodium hydroxide, essential oils, polymer, surfactants, terpenes and inert ingredients.
- 2.2 Risk Phrases: R8 - Contact with combustible materials may cause fire.
R22 - Harmful if swallowed.
R32 - Contact with acids liberates toxic gas.
- 2.3 Classification/Symbol: O - Oxidising
XN - Harmful

III. Hazards Identification

- 3.1 Adverse Health Effects: Irritating to eyes. Harmful if swallowed.
- 3.2 Environmental Effects: Toxic to aquatic organisms.
- 3.3 Physical & Chemical: In contact with strong acids can develop toxic gas (chlorine dioxide) which may cause risk of explosion. Avoid heating and exposure to strong sunlight which can cause evaporation to dryness and risk of fire, explosion. Contact with combustible materials (grease, fats, wood, cellulose, paper, etc.) may cause fire.

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IV. First Aid Measures

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| 4.1 | Eye Contact: | Immediately flush eyes with water for at least 15 minutes.
Seek medical advice if symptoms persist. |
| 4.2 | Skin Contact: | Remove contaminated clothing & wash affected areas with soap and water.
Soak contaminated clothing with water.
Seek medical attention if irritation persists. |
| 4.3 | Inhalation: | Remove to fresh air. Seek medical attention.
If the patient is affected by chlorine dioxide gas, this is toxic and requires urgent medical attention.) |
| 4.4 | Ingestion: | Rinse mouth with water and give water or milk to drink.
Seek medical attention |
| 4.5 | Immediate Medical Advice | Treat symptoms. Risk of pulmonary oedema |

V. Fire Fighting Measures

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| 5.1 | Special fire/explosion hazard | May decompose in fire producing toxic chlorine compounds.
Strong oxidising agent - will assist combustion. Risk of drums bursting. |
| 5.2 | Products of combustion | Not combustible. Toxic chlorine compounds maybe released in fire. |
| 5.3 | Fire Fighting procedures/ | Wear S.C.B.A. for chlorine/Extinguishing media chlorine dioxide.
Keep containers cool with water spray.
Avoid dispersion in the water courses.
Do not use carbon dioxide or organic material.
In case of spreading avoid drying by dilution with plenty of water. |

VI. Accidental Release Measures

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| 6.1 | Personal Protection: | Wear goggles, plastic gloves (not rubber) and boots.
Eyewash facilities should be available. |
| 6.2 | Environmental Precautions | Do not allow to dry. If possible, drench with water.
Contain with inert material.
Pump into a suitable container or otherwise absorb with non combustible materials. If substance has entered a water course or sewer advise relevant local authorities. |
| 6.3 | Methods of Cleaning Up: | Flush away any residues with excess water.
Spillages greater than 25 litres should be decontaminated with sodium sulphite solution with a contact time of at least 10 minutes before flushing. |

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VII. Handling And Storage

- 7.1 Precautions During Handling:
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| Technical Measures: | Ventilation of the place, local exhaust of dust or vapours (in case of product decomposition). |
| Precautions: | Avoid contact with eyes and skin and breathing of any activated chlorine dioxide vapours. Wear personal protective equipment, maintain eye washer/shower facilities and source of running water in the vicinity. |
| Safe Handling Advice: | Handle product with care and avoid contamination. |
- 7.2 Precautions During Storage:
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| Storage Conditions: | Store in a cool, clean, well ventilated area.
Do not store on wooden surfaces or flammable pallets.
Keep away from incompatible (especially acids) and combustible materials, from direct sunlight and heating sources.
Provide water facilities, do not allow spilt product dry. |
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- 7.3 Packaging Materials:
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| | Do not use common steel, aluminium, copper and its alloys or rubber.
Use stainless steel, glass, ceramics, polyethylene, PVC. |
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VIII. Exposure Controls/Personal Protection

- 8.1 Special Protective Measures
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| Respiratory: | In confined spaces or indoors, ensure working room air concentrations are less than 0.1ppm chlorine dioxide gas. Wear S.C.B.A. if chlorine dioxide gas is evolved. |
| Hand: | Wear plastic gloves. |
| Eye: | Wear goggles. |
| Skin: | Work suit, preferably made of PVC, Neoprene, nitrile rubber.
Avoid leather, cotton or natural rubber due to fire risk. |
- 8.2 Exposure Limits:
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| | For chlorine dioxide gas:
0.1ppm (0.3mg/cu.m)
0.3ppm (0.9mg/cu.m) STEL. |
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IX. Physical and Chemical Properties

- 9.1 Physical State: Pale yellow liquid.
- 9.2 Odour: Ozone like
- 9.3 Temperature Characteristics: Freezing point: < minus 9°C
- 9.4 Solubility:
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| In Water: | Completely miscible. |
| In Solvents: | Not soluble. |
- 9.5 Flammability: Not combustible

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X. Stability and Reactivity

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| 10.1 Stability | Minimum 6 months in unopened containers. |
| 10.2 Conditions/Materials to Avoid: | Avoid exposure to direct sunlight and heat.
Decomposed by heating, acids and organic and combustible matter. |
| 10.3 Decomposition Temperature
Dangerous Products
Released: | At very high temperatures i.e. greater than 100°C, and it may decompose to produce chlorine dioxide gas which can cause overpressure and burst in confined spaces. Toxic chlorine dioxide gas may then be released. |

XI. Toxicological Information

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| 11.1 Acute Toxicity: | LD50 orl.rat (by feeding-m/f): >2000 mg/kg.
LD50 dermal.rbt: => 2000 mg/kg. |
| 11.2 Local Effects: | Skin contact: not irritating (patch test, rabbit, 4h)
Eyes: irritant to eyes (Draiza test rabbit). |
| 11.3 Long Term Toxicity: | Carcinogenicity: No carcinogenic potential.
Teratogenicity: No teratogenic potential. |

XII. Biological Information

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| 12.1 Mobility: | Will disperse through aqueous systems. |
| 12.2 Persistence and Degradability: | Will degrade. |
| 12.3 Bioaccumulative Potential: | Not known. |

XIII. Disposal Considerations

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| 13.1 Disposal of product: | Dispose of through approved waste disposals operative. |
| 13.2 Disposal of packaging: | Rinse empty containers thoroughly before disposal. |

XIV. Transport Information

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| 14.1 UN No: | 3266 |
| 14.2 UK Road:
Hazchem Code:
Classification:
Packing Group: | 2X (additional advice A)
Corrosive substance, Class 8.
II. |
| 14.3 Spillage: | Larger than 25 litres, decontaminate with sodium sulphite solution with a contact time of least 10 minutes, then dilute with water & flush to foul drain. |

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XV. Regulatory Information

15.1 The chemicals (Hazard Information and Packaging for Supply) Regulations 1994:

- Index No: Not listed
- Risk Phrases:
 - R8 Contact with combustible materials may cause fire.
 - R22 Harmful if swallowed.
 - R32 Contact with acids liberates toxic gas.
- Safety Phrases:
 - S14 Keep away from acids.
 - S17 Keep away from combustible materials.
 - S26 in case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - S36 Wear suitable protective clothing,
 - /37 gloves and eye/face protection.
 - /39
- Classifications Symbols:
 - O Oxidiser
 - Xn Harmful

15.2 Exposure Limits: For chlorine dioxide gas:
0.1ppm (0.3mg/cu.m)
0.3ppm (0.9mg/cu.m) STEL.

XVI. Other Information

17.1 Recommended uses: Industrial Odour Control Compound.

This information is given in good faith and is based on information and tests believed to be reliable. The suitability of this product for any particular use is not suggested or implied. This document is not a specification and properties shown are not guaranteed.

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Always READ material safety data sheet before use.

preserving the environment

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