Material Safety Data Sheet

Keeper MSDS – Revision 6 – September 2008

SECTION 1 - IDENTIFICATION OF SUBSTANCE

Product Name	KEEPER™
Application	PRECURSOR TO ClO_2 PRODUCTION FOR WATER TREATMENT
Manufacturer:	Tristel Technologies Limited
Address	Lynx Business Park, Fordham Road, Snailwell, Cambs, CB8 7NY
Telephone	+ 44 (0) 1638 721500
	+44 (0) 7798 805692 (Out of hours)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Per Cent	CAS	EINECS	CLASSIFICATION
Sodium Chlorite	8-25%	7758-19-2	231-836-6	Xn: R 22-32-41

SECTION 3 - HAZARDS IDENTIFICATION

Harmful if swallowed. Risk of serious damage to eyes. Contact with acids liberates chlorine dioxide. Dried material has oxidising properties.

SECTION 4 - FIRST AID

Exposure Route	Symptom	Treatment
Inhalation	Irritation of respiratory tract	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete seek medical attention.
Skin Contact	Mild irritation	Drench skin with plenty of water. Remove contaminated clothing and wash before reuse. If large areas of the skin is damaged or if irritation persists seek medical attention.
Eye contact	Severe irritation	Irrigate thoroughly with water for at least 10 minutes. Obtain medical attention.
Ingestion	Irritation of digestive tract. Stomach cramps.	Wash out mouth with water. Do not induce vomiting. If patient is conscious, give water to drink in small sips. Seek immediate medical attention.

Immediate Treatment/Antidote:
Delayed Effects:

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishers	Water spray or jet
Unsuitable Extinguishers	Dry powder, carbon dioxide
Hazardous Combustion Products	Product itself is not combustible, dried product has oxidising properties. May yield oxygen and chlorine dioxide in a fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Safety Precautions	Wear suitable PPE - See section 8.
Environmental Procedures	Avoid contamination of drains, soil and water courses
Clean Up Procedures	Bund or absorb spilt product with inert absorbents (do not use combustible materials). Transfer to a clean container for recycling or disposal. Never return spilt material to original containers. Rinse away residues with plenty of water.

SECTION 7 - HANDLING AND STORAGE

Handling

Ventilation	Good general ventilation.
Prohibited Procedures and Equipment	Never return spilt material to original containers. Do not allow to dry out.
Recommended Procedures and Equipment	Avoid contact with skin, eyes and clothing. Do not inhale vapours or mists. Safety showers and eye bath should be available.

Storage

Temperature Range	Cool
Keep Away From	See section 10
Suitable Storage Media	Only use containers specifically permitted for sodium chlorite. Do not empty containers by means of pressure.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits	8 Hr TWA	15 Min STEL	Source
As Chlorine Dioxide	0.1 ppm	0.3 ppm	EH40 (Amended Each Year)

Personal Protection

Respiratory	Type approved for chlorine dioxide if required.
Hand	PVC, neoprene or nitrile rubber gloves
Eye	Chemical goggles and/or face shield.
Skin	PVC, neoprene or nitrile overalls.
Engineering Control Measures	Use only in well ventilated areas.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odour	Colourless liquid almost odourless.
Specific Gravity	1.06-1.09 @ 20°C
pH	8.5 - 13 @ 20°C
Solubility in water	Miscible
Boiling Point	105°C
Melting point	-10°C
Flammability	Not combustible, but will liberate oxygen in a fire
Oxidising Properties	Dried material exhibits oxidising properties.

SECTION 10 - STABILITY AND REACTIVITY

Known Hazardous Reactions	Product is an oxidising agent and reactive. Danger of decomposition when exposed to heat or contamination. Contact with acids liberates toxic chlorine dioxide. Sodium chlorite dried into combustible materials renders them highly flammable.
Conditions To Avoid	Heat, Direct sunlight.
Materials To Avoid	Acids; Impurities; Metallic salts; Reducing agents; Combustible materials
Hazardous Decomposition Products	Oxygen Chlorine dioxide

SECTION 11 - TOXICOLOGICAL INFORMATION

Effects

Harmful if swallowed. Material may produce toxic gas when in contact with stomach acids. Not a primary skin irritant by OECD 404 test. Highly irritating to eyes by OECD 404 test.

LD_{50} 1019 mg/Kg oral-rat

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Effects

All Prevent penetration into soil, stretches of water and drainage systems. Do not allow into water courses without pre-treatment. Danger to ground water and drinking water.

Aquatic Toxicity LC_{50}, 96h fish (Brachydanio rerio) › 500 mg/l

SECTION 13 - DISPOSAL CONSIDERATIONS

Substance	Via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.
Container	As substance.

SECTION 14 - TRANSPORT INFORMATION

UN No.	1908	**Primary Hazard**	Corrosive	**Packaging Group**	II
H.I. Number	80	**Class/Item No.**	8, 61b		

SECTION 15 - REGULATORY INFORMATION

Supply Label details	Ref. CHIP 3
Label Name	Keeper – Sodium Chlorite Solution ...%
Symbols	Harmful
Risk Phrases	22-32-41 Harmful if swallowed. Contact with acids liberates toxic gas. Risk of serious damage to eyes.
Safety Phrases	14-26-36/37/39 Keep away from combustible materials, acids, alkalis, reducing agents and metal salts. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection.
Other	The information contained in this data sheet does not constitute an assessment of workplace risks.

SECTION 16 - OTHER INFORMATION

This material is usually used as a precursor for chlorine dioxide production.

Sources

CHIP2 AS AMENDED (CHIP 96, 97, 98, 99, 2000)

APPROVED CLASSIFICATION AND LABELLING GUIDE

SAFETY DATA SHEET APPROVED CODE OF PRACTICE
APPROVED SUPPLY LIST
COMMISSION DIRECTIVE 84/449/EEC
EH 40
THE CARRIAGE OF DANGEROUS GOODS BY ROAD AND RAIL (CLASSIFICATION, PACKAGING AND LABELLING) REGULATIONS 1995
APPROVED CARRIAGE LIST

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