Revision Date: 01/06/18

SAFETY DATA SHEET
CHLORINE TABLET

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF THE COMPANY

1.1 Product identifier Chlorine Tablet C312

1.2 Use (s) Disinfection and Chlorination

1.3 SDS Supplier

Hygenol Cleaning supplies
Unit 5 Parkway Business Centre
Deeside Ind Est
Flintshire
CH5 2LD

Telephone:01244288882
Fax No:01244288878
e-mail: info@hygenol.com

1.4 Emergency Telephone 01244 288882 (Office hrs)

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)

Acute tox. 4 H302
Eye Irrit. 2 H319
STOT SE 3 H335
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

2.1.2 Classification according to EC Directive 67/548/EEC (CHIP 4)

Xn: R22, R31
Xi: R36/37
N: R50,53

2.1.3 Additional information

See section 16 for full text of H statements and R phrases

2.2 LABELLING ELEMENTS

2.2.1 Labelling in accordance with EC Regulation No 1272/2008 (CLP/GHS)

Pictogram(s):

Signal word WARNING

Hazard statement(s)

H302 HARMFUL IF SWALLOWED
H319 CAUSES SERIOUS EYE IRRITATION.
H335 MAY CAUSE RESPIRATORY IRRITATION.
H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS

2. HAZARDS IDENTIFICATION

Precautionary statement(s)	P273	AVOID RELEASE TO THE ENVIRONMENT.
	P280	WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION.
	P301+P330+P331	IF SWALLOWED. RINSE MOUTH. DO NOT INDUCE VOMITTING.
	P304+340	IF INHALED: REMOVE TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING.
	P305+P351+P338	IF IN EYES. RINSE CAUSTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.
	P337+313	IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ATTENTION. DISPOSE OF CONTENTS.
Supplementary labelling	EUH031	CONTACT WITH ACIDS LIBERATES TOXIC GAS

2.3 Other hazards None known

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation MIXTURE OF INORGANIC SUBSTANCES

Substances

Chemical name	CAS-No	EINECS/ELINCS	Classification	Concentration
SODIUM DICHLOROISOCYANURATE (ANHYDROUS)	2893-78-9	220-767-7	**CHIP:** O: R8; Xn: R22, R31; Xi: R36/37; N: R50,53 **CLP:** Ox. Sol. 3 H272; Acute Tox. 4 H302; Eye Irrit. 2 H319; STOT. SE 3 H335; Aquatic Acute 1 H400; Aquatic Chronic 1 H410	50-65%
ADIPIC ACID REACH Reg. no. 01-2119457561-38-0002	124-04-9	204-673-3	**CHIP:** Xi: R36 **CLP:** Eye Irrit. 2 H319	20-30%

4. FIRST AID MEASURES

4.1 Description of measures

Inhalation Remove casualty to fresh air. If necessary, seek medical advice.

Skin contact Clean areas of skin affected with soap and plenty of water. If necessary, seek medical advice.

Eye contact Immediately wash out eye thoroughly with plenty of water until irritation subsides; consult an eye specialist/ophthalmologist.

Ingestion If product is swallowed, do NOT induce vomiting. Drink plenty of water; if necessary, seek medical advice.

4.2 Most important effects/symptoms None known

4.3 Immediate/special treatment Treatment as described above. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media Water. Do not use dry chemical extinguisher containing ammonia compounds. Flooding amounts of water may be required before extinguishment can be accomplished

5. FIRE FIGHTING MEASURES

5.2 Special hazards When heated to decomposition, may release poisonous and corrosive fumes of nitrogen richloride, chlorine and carbon monoxide.

5.3 Advice for fire fighters Wear self-contained breathing apparatus. Cool containers with water spray. Avoid run-off water entering the drains (e.g. use barriers)

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions In addition to respiratory protection, wear coveralls; chemical resistant gloves; chemical resistant footwear, and chemical resistant headgear for overhead exposure.

6.2 Environmental precautions Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.

6.3 Methods and materials for cleaning up Take up as appropriate, e.g. sweep or vacuum up, into tightly closed containers. Label container and dispose of as prescribed. If spill material is still dry, do not put water directly on this product as a gas evolution may occur. This material is heavier than water. This material is soluble in water. Stop flow of material into water source as soon as possible. Begin monitoring for available chlorine and pH immediately.

6.4 Reference to other sections See section 8 for personal protective equipment.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling Handle in accordance with good hygiene and safety practice. Keep container tightly closed. Keep away from incompatible substances.

7.2 Conditions for safe storage Store in a cool, dry, well-ventilated area, away from incompatible materials (see 'materials to avoid'). Do not store at temperatures above 60°C/140°F. Product has an indefinite shelf-life limitation.

7.3. Specific end use(s) Disinfection and Chlorination

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Controls parameters There are no occupational exposure limit values available. Comply with good practice.

8.2 Exposure controls

Engineering controls Provide adequate ventilation (e.g. local exhaust ventilation).

Personal protection Observe normal standards for handling chemicals.
Wash hands before breaks and after work.
Wear personal protective equipment appropriate to the task (see below)

Eye protection Safety goggles (EN 166 or 169) if risk of eye contamination.

Skin protection Neoprene gloves (also consider your own risk assessment; e.g. breakthrough times, rates of diffusion and degradation, tasks undertaken)

Respiratory protection When dusty conditions are encountered, wear a full-face respirator with chlorine cartridges for protection against chlorine gas and dust/mist pre-filter

Other protection Protective overalls

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties

Physical form Granular solid or tablet-form product.

Colour White

Odour Mild chlorine-like

Odour Threshold Not determined

9. PHYSICAL AND CHEMICAL PROPERTIES

pH	< 6.0
Boiling pt / range	Not determined
Melting pt / range	From 150 °C
Flash point	Not applicable
Flammability	Not applicable
Evaporation rate	Not applicable
Explosion limits	Lower explosive limit: 10-15g/m^3 (data for adipic acid)
Auto-ignition temperature	Not determined
Decomposition temp.	From 230°C
Density	Not determined
Vapour pressure	Not applicable
Vapour density	Not applicable
Water solubility	>2.5g/100ml @ 20°C
Explosive properties	Not determined
Oxidising properties	Not determined
Partition coeff. Log $_{Oct/water}$	0.09 @ 20°C (data for adipic acid)
9.2 Other information	None known

10. STABILITY AND REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under normal conditions of handling. Do not package in paper or cardboard.
10.3 Hazardous reactions	Hazardous exothermic polymerization will not occur.
10.4 Conditions to avoid	Heating above decomposition temperature.
10.5 Incompatible material	Organic materials, reducing agents, acids, bases, nitrogen containing materials, other oxidisers, dry fire extinguishers containing mono-ammonium compounds, oils, sawdust, grease
10.6 Hazardous decomposition products	Nitrogen trichloride, chlorine, carbon monoxide.

11. TOXICOLOGICAL INFORMATION

11.1 information on toxicological effects

Acute toxicity	LD_{50} rat (oral)	735	mg/kg	Data for sodium dichloroisocyanurate
	LD_{50} rat (oral)	> 5500	mg/kg	Data for adipic acid
	LD_{50} rabbit (derm)	> 2000	mg/kg	Data for sodium dichloroisocyanurate
	LD_{50} rabbit (derm)	7940	mg/kg	Data for adipic acid
	LC_{50} rat (inhal)	> 150	mg/m^3	Data for sodium dichloroisocyanurate (1 hour)

Dermal compatibility Strongly irritant. Data for sodium dichloroisocyanurate

11. TOXICOLOGICAL INFORMATION

Mucous membrane compatibility Strongly irritant to eyes Data for sodium dichloroisocyanurate

Further information None sensitising (guinea pig - data for sodium dichloroisocyanurate).

12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC_{50}	Fish (Rainbow trout)	0.22	mg/l	96 hr	sodium dichloroisocyanurate
LC_{50}	Fish (Bluegill sunfish)	0.28	mg/l	96 hr	sodium dichloroisocyanurate
LC_{50}	Daphnia magna	0.20	mg/l	48 hr	sodium dichloroisocyanurate
LC_{50}	Daphnia magna	46	mg/l	48 hrs	Data for adipic acid

12.2 Degradability Not determined

12.3 Bioaccumutive potential LogBCF: 3.162 Data for adipic acid

12.4 Mobility in soil 60% degradation 1-6 days (Data for adipic acid)

12.5 PBT/vPvB assessment Not applicable

12.6 Other adverse effects Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment measures

Advice on disposal If possible, recycle to supplier or approved recycling company. If not (e.g. designated as waste), dispose of in accordance with national and local authority regulations, e.g. The Hazardous Waste (England & Wales) Regulations 2005.

Contaminated packaging Treat empty containers in the same way as the product: if possible wash out thoroughly and recycle.

14. TRANSPORT INFORMATION

14.1 United Nations number (ADR, IMDG, IATA) UN 3077

14.2 Proper shipping name (ADR, IMDG, IATA) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DICHLOROISOCYANURIC ACID SALTS)

14.3 Transport class(s) (ADR, IMDG, IATA) 9

14.4 Packing group (ADR, IMDG, IATA) III

14.5 Environmental hazards (ADR, IMDG, IATA) The product should be marked as a marine pollutant.

14.6 Special procedures Not applicable

14.7 Transport in bulk Not applicable

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations	The product is classified in accordance with the Chemicals (Hazard Information and EC Regulation 1272/2008 (CLP). Other regulatory information and provisions are not applicable for this product.
15.2 Chemical safety assessment	Not applicable

16. OTHER INFORMATION

Further information The SDS has been revised in accordance with EC Regulation 1272/2008 (CLP)

Risk phrases and hazard statements referred to in sections 2/3

R8: Contact with combustible material may cause fire.
R22: Harmful if swallowed.
R31: Contact with acids liberates toxic gas
R36: Irritating to eyes
R36/37: Irritating to eyes and respiratory system
R50: Very toxic to aquatic organisms
R53: May cause long term adverse effects in the aquatic environment

H272: May intensify fire; oxidiser
H302: Harmful if swallowed.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

Sources of data Other suppliers' safety data sheets

Date of issue 05-08-2014

This information is based on our present state of knowledge and is intended to describe our products from the point of view of the safety requirements. It should not be construed as guaranteeing specific properties.