

CHLORO MAXX**MATERIAL SAFETY DATA SHEET (MSDS)****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product name : CHLORO MAXX
Product code : NXP90

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. For Pool and Spa

1.3. Details of the supplier of the safety data sheet

ZYAX Chem LLP
401, 402 & 403 Concorde, Plot No.
66 A, Sector No. 11, CBD Belapur,
Navi Mumbai - 400 614, Maharashtra, INDIA.
Contact No.: +91 87792 40420
info@zyax.in - www.zyax.in

1.4. Emergency telephone number

Emergency number : +91 22 2757 3899

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Oxidizing solids Category 2 (H272)

Health hazards

Acute oral toxicity Category 4 (H302)
Serious Eye Damage/Eye Irritation Category 2 (H319)
Specific target organ toxicity - (single exposure) Category 3 (H335)

Environmental hazards

Acute aquatic toxicity Category 1 (H400)
Chronic aquatic toxicity Category 1 (H410)

Full text of Hazard Statements: see section 16

2.2. Label elements

Signal Word

Danger



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| | |
|--------------------------|--|
| Hazard Statements | H272 - May intensify fire; oxidizer H302 - Harmful if swallowed H319 - Causes serious eye irritation H335 - May cause respiratory irritation H410 - Very toxic to aquatic life with long lasting effects EUH031 - Contact with acids liberates toxic gas |
| Precautionary Statements | P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P233 - Keep container tightly closed P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxicity to Soil Dwelling Organisms
Toxic to terrestrial vertebrates

SECTION 3: Composition/information On Ingredients

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|----------------------------|-----------------------------|----|---|
| Trichloro-S-triazinetrione | 87-90-1 / EEC No. 201-782-8 | 97 | Ox. Sol. 2 (H272) Acute Tox. 4 (H302) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) [EUH031] |
| Trichloro-S-triazinetrione | - | 10 | - |

Full text of H-statements: see section 16

SECTION 4: First Aid Measures

4.1. Description of first aid measures

| | |
|------------------------------------|--|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Skin Contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. Take off contaminated clothing and shoes immediately. |
| Ingestion | Clean mouth with water. Get medical attention. |
| Inhalation | Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |



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4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Carbon dioxide (CO₂), Dry chemical, Chemical foam.

Extinguishing media which must not be used for safety reasons : No information available.

5.2. Special hazards arising from the substance or mixture

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen chloride gas.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

Section 7: Handling And Storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials.

Store under an inert atmosphere.



7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure Controls / Personal Protection

8.1. Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL)

No information available

Route of exposure

Acute effects

Acute effects

Chronic effects

Chronic effects

Oral

(local)

(systemic)

(local)

(systemic)

Dermal

Inhalation

Predicted No Effect Concentration (PNEC) : No information available.

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles (European standard - EN 166)

Hand Protection

Protective gloves

Glove material

Breakthrough time

Glove thickness

EU standard

Glove comments

Natural rubber

See manufacturers

-

EN 374

(minimum requirement)

Butyl rubber

Nitrile rubber

Neoprene

PVC

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure



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Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

| | |
|---------------------------------|--|
| Respiratory Protection | When workers are facing concentrations above the exposure limit they must use \ appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly |
| Large scale/emergency use | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Particulates filter conforming to EN 143 |
| Small scale/Laboratory use | Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted |
| Environmental exposure controls | Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. |

SECTION 9: Physical And Chemical Properties

9.1. Information on basic physical and chemical properties

| | | |
|---|-------------------------------|-----------------------------------|
| Physical State | Powder Solid | |
| Appearance | White | |
| Odor | Odorless | |
| Odor Threshold | No data available | |
| Melting Point/Range | 245 - 251 °C / 473 - 483.8 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | No information available | |
| Flammability (liquid) | Not applicable | Solid |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Flash Point | No information available | Method - No information available |
| Autoignition Temperature | No data available | |
| Decomposition Temperature | 225 °C | |
| pH | 3.0 | 1% aq.sol |
| Viscosity | Not applicable | Solid |
| Water Solubility | 12 g/L (25°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Vapor Pressure | No data available | |
| Density / Specific Gravity | No data available | |
| Bulk Density | No data available | |
| Vapor Density | Not applicable | Solid |
| Particle characteristics | No data available | |



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9.2. Other information

| | |
|----------------------|------------------------|
| Molecular Formula | C3 Cl3 N3 O3 |
| Molecular Weight | 232.41 |
| Oxidizing Properties | Oxidizer |
| Evaporation Rate | Not applicable - Solid |

SECTION 10: Stability and reactivity

10.1. Reactivity

Yes

10.2. Chemical stability

Stable under normal conditions, Hygroscopic, Oxidizer: Contact with combustible/organic material may cause fire.

10.3. Possibility of hazardous reactions

| | |
|--------------------------|-----------------------------|
| Hazardous Polymerization | : No information available. |
| Hazardous Reactions | : No information available. |

10.4. Conditions to avoid

Incompatible products. Exposure to moist air or water. Excess heat. Combustible material.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong reducing agents. Combustible material.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen chloride gas.

SECTION 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;

| | |
|------------|--|
| Oral | Category 4 |
| Dermal | Based on available data, the classification criteria are not met |
| Inhalation | Based on available data, the classification criteria are not met |

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------------------|--------------------------|------------------------------|---------------------------------|
| Trichloro-S-triazinetriene | LD50 = 406 mg/kg (Rat) | LD50 > 2000 mg/kg (Rabbit) | LC50 > 5.25 mg/L (Rat) 4 h |

| | | |
|-----|------------------------------------|---|
| (b) | skin corrosion/irritation; | No data available |
| (c) | serious eye damage/irritation; | Category 2 |
| (d) | respiratory or skin sensitization; | |
| | Respiratory | No data available |
| | Skin | No data available |
| (e) | germ cell mutagenicity; | No data available |
| (f) | carcinogenicity; | No data available |
| | | There are no known carcinogenic chemicals in this product |



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| | | |
|--|---|--|
| (g) | reproductive toxicity; | No data available |
| (h) | STOT-single exposure; Results / Target organs | Category 3 Respiratory system. |
| (i) | STOT-repeated exposure; Target Organs | No data available No information available. |
| (j) | aspiration hazard; | Not applicable Solid |
| Other Adverse Effects | The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information | |
| Symptoms / effects, both acute and delayed | No information available. | |

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: Ecological Information

12.1. Toxicity

Ecotoxicity effects The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| | | | |
|----------------------------|---|--|------------------|
| Component | Freshwater Fish | Water Flea | Freshwater Algae |
| Trichloro-S-triazinetrione | LC50: 0.13 - 0.5 mg/L, 96h static (Lepomis macrochirus) LC50: 0.06 - 0.11 mg/L, 96h static (Oncorhynchus mykiss) | EC50: 0.16 - 0.18 mg/L, 48h Static (Daphnia magna) EC50: = 0.21 mg/L, 48h (Daphnia magna) | |

| | | |
|----------------------------|----------|----------|
| Component | Microtox | M-Factor |
| Trichloro-S-triazinetrione | | 10 |

12.2. Persistence and degradability

Persistence Soluble in water, Persistence is unlikely, based on information available.
Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

Endocrine Disruptor Information



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12.7. Other adverse effects

Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues/Unused Products

Should not be released into the environment. Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

SECTION 14: Transport Information

IMDG/IMO

| | |
|----------------------------------|--------------------------------|
| 14.1. UN number | UN2468 |
| 14.2. UN proper shipping name | TRICHLOROISOCYANURIC ACID, DRY |
| 14.3. Transport hazard class(es) | 5.1 |
| 14.4. Packing group | II |

ADR

| | |
|----------------------------------|--------------------------------|
| 14.1. UN number | UN2468 |
| 14.2. UN proper shipping name | TRICHLOROISOCYANURIC ACID, DRY |
| 14.3. Transport hazard class(es) | 5.1 |
| 14.4. Packing group | II |

IATA

| | |
|----------------------------------|--------------------------------|
| 14.1. UN number | UN2468 |
| 14.2. UN proper shipping name | TRICHLOROISOCYANURIC ACID, DRY |
| 14.3. Transport hazard class(es) | 5.1 |
| 14.4. Packing group | II |

| | |
|-----------------------------|--|
| 14.5. Environmental hazards | Dangerous for the environment Product is a marine pollutant according to the criteria set by IMDG/IMO |
|-----------------------------|--|

| | |
|------------------------------------|---------------------------------|
| 14.6. Special precautions for user | No special precautions required |
|------------------------------------|---------------------------------|

| | |
|---|---------------------------------|
| 14.7. Maritime transport in bulk according to IMO instruments | No special precautions required |
|---|---------------------------------|

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).



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| Component | ELINCS | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | AICS | KECL |
|----------------------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|----------|
| Trichloro-S-triazinetriene | 201-782-8 | - | | X | X | - | X | X | X | X | KE-34101 |

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

National Regulations
WGK Classification

See table for values

| | | |
|----------------------------|--|-------------------------|
| Component | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
| Trichloro-S-triazinetriene | WGK2 | |

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3

H272 - May intensify fire; oxidizer
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
EUH031 - Contact with acids liberates toxic gas

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text