



German metal Surface treatment Chemicals Co.
Research and Development Department
Water treatment Division

MATERIAL SAFETY DATA SHEET

CMC 3093

MANUFACTURER:

German metal surface treatment (SUGEST)

P.O. Box 2951,Riyadh 11461,K.S.A.

Tel: (00966) (01) 4647711 (20 Lines)

Fax: (00966) (01) 2170866

1. Product and Company Identification

NAME CMC 3093
USE used as scale and corrosion inhibitor
LABEL CMC 3093
Company German metal surface treatment chemicals co.

2. Product Description

CMC 3093 is a highly effective combined scale and corrosion inhibitor, a multifunction-Zinc phosphate based blend of scale and corrosion inhibitors for open re-circulating water systems.

3. Hazards Identification

Emergency Overview

 Cause eye and skin irritation/or burn. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.

May cause an allergic skin reaction. Harmful or fatal if swallowed. Harmful if inhaled or absorbed through the skin.

PRIMARY ROUTES OF ENTRY: Eye contact, skin contact, ingestion, and inhalation of product mists TARGET

ORGANS: Eye, skin, respiratory system, liver, kidney, and central nervous system.

Potential Health Effects

HMIS: Health 3 Flammability 0 Reactivity 0 Personal Protection: E
 4 = extreme 3 = high 2 = moderate 1 = slight



- **Inhalation:** This product is not expected to present an inhalation hazard unless mists or vapors are generated. Exposure to vapors or mists may cause throat irritation, headache, nausea, vomiting, dizziness, drowsiness, central nervous system depression, pulmonary edema, involuntary eye movement, and/or coma.
- **Skin contact:** Contact with this product may cause skin irritation. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in the absorption of potentially lethal amounts of the product component
- **Eye contact:** Contact with this product may cause eye irritation.
- **Ingestion:** Harmful if swallowed, Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea. Kidney damage may be evidenced by changes in urine output, urine appearance, or edema (swelling from fluid retention).



German metal Surface treatment Chemicals Co.
Research and Development Department
Water treatment Division

4. Chemical Composition

Ingredient	CAS No	Percent
Organophosphonates	2809 – 21 - 4	20 - 60
Zinc chloride	7646 – 85 - 7	10 - 20
Water	7732 – 18 - 5	To 100

5. Physical and Chemical Properties

Appearance	Clear Colourless to pale yellowish liquid
Odour	Characteristic
pH at 25 °C	< 2
Density at 25 °C	1.25 ±0.05 gm/cm ³

6. First Aid Measures

Inhalation:

Remove to fresh air. If breathing is difficult, have a trained medical person administer oxygen. Seek medical aid.

Skin contact:

Remove contaminated clothing and footwear. For skin contact, flush with large amounts of water. Irritation persists seek immediate medical attention.

Eye contact:

In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and if irritation persists, seek immediate medical attention.

Ingestion:

Seek medical advice. DO NOT induce vomiting unless directed to do so by medical personnel. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.

7. Fire Fighting Measures

Fire: Non flammable

Fire Extinguishing Media: Use dry chemical, foam, or carbon dioxide. Water or foam may cause frothing. Water spray may be used to extinguish surrounding fire and cool exposed containers. Water spray will also reduce fume and irritant gases.

Hazardous combustion products: In event of fire created carbon oxides may be formed.

8. Accidental Release Measures

Use personal protection recommended in Section 10, isolate the hazard area and deny entry to unnecessary and unprotected personnel.



German metal Surface treatment Chemicals Co.
Research and Development Department
Water treatment Division

Environmental precautions:

Prevent runoff from entering drains, sewers or waterways.

Clean-up methods:

Should be prevented from entering drains, eliminate all ignition sources. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and reclaim or dispose in sealed containers in licensed waste. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

9. Handling and Storage

Handling:

Before use carefully read the product label. Use of safe work practices are recommended to avoid eyes or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated area (eg. If container is damaged).

Storage:

Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Removed from oxidizing agents, acids and foodstuffs. Ensure containers are adequately labeled and protected from physical damage when not in use.

Store separated from: Cyanides. Reducing Agents. Avoid contact with strong oxidizers. Strong acids.

Storage Conditions: Store in a cool, dry and good ventilated place. Keep container tightly closed after opening. Prevent direct sun light or ignition sources.

Temperature Limit: max 35 °C.

Maximum Storage Period: 24 Months under standard storage conditions.

Container Type Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001.

For information on product shelf life, please review labels on container.

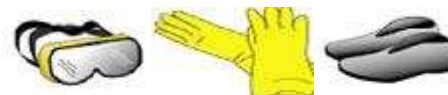
10. Exposure Controls/Personal Protection

Exposure Limit Values: Not applicable

Exposure Limits:

TWA: 1 STEL: 2 (mg/m³) [United Kingdom (UK)] TWA: 1 STEL: 2 (mg/m³) from ACGIH (TLV) [United States] TWA: 1 STEL: 2 (mg/m³) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Engineering controls:



Ventilation Requirements No special ventilation requirements General room ventilation is adequate.

Respiratory protection:

If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

Eye/face protection: Chemical splash goggles.

Skin protection: For prolonged or repeated handling, use protective gloves made of: Neoprene, nitrile, polyethylene or PVC. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

General Hygiene Considerations: Avoid direct contact with eyes and skin.

11. Stability and Reactivity

Stability: Stable under normal temperature conditions and recommended use.

Polymerization: Hazardous polymerization does not occur



German metal Surface treatment Chemicals Co.
Research and Development Department
Water treatment Division

Materials to avoid: Strong acids. Strong oxidizing substances.

Conditions to avoid: Toxic gases/vapors/fumes of: Nitrous gases (NO_x). Phosphine. Carbon monoxide (CO). Carbon dioxide (CO₂).

12. Toxicological information

(A) Acute Toxicity

Oral (rat) LD50: 15000 mg/kg

Ecological information

Acute toxicity for fish (*Oncorhynchus mykiss*) LC(50) (96h) 0.14-0.26 mg Zn²⁺/L

Acute toxicity for ctustacea (*Daphnia magna*) EC(50) (48h) 0.04 – 0.86 mg Zn²⁺/L

Acute toxicity for algae (*Selenastrum capricornutum*) EC(50) (72h) 0.136 – 0.150 mg Zn²⁺/L

13. Disposal Considerations

Disposal method:

Industrial setting: Disposal is according to all federal, state and local authorities for restrictions on disposal of chemical waste, manage chemical, waste through an approved waste treatment facility, do not reuse empty container in accordance with current local community codes please recycle empty container whenever possible.

14. Transport information

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information
 Land and Sea Transport

UN Number:	3077
Transport Hazard Class	9
Shipping Name	CMC 3093
Packing Group:	III

15. Other Information

REGULATORY STATUS (US)

This material is reportable under Zinc Compounds (N982)

16. Packing

HDPE container and sealed cap

DISCLAIMER: *The data contained herein are furnished for information only and are believed to be reliable. However, SUGEST and its affiliates ("SUGEST") does not assume responsibility for any results obtained by persons over whose methods SUGEST has no control. It is the user's responsibility to determine the suitability of SUGEST's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any SUGEST's products. In light of the foregoing, SUGEST specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of SUGEST's products. SUGEST further disclaims any liability for consequential or incidental damages of any kind, including lost profits.*