



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

MATERIAL SAFETY DATA SHEET

CMC 5030

MANUFACTURER:

German metal surface treatment (SUGEST)

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Health	2
Fire	0
Reactivity	0
Personal Protection	E

1. Product and Company Identification

NAME CMC 5030
USE used as scale and corrosion inhibitor
LABEL CMC 5030
Company German metal surface treatment chemicals co.

2. Product Description

CMC 5030 is scientifically formulated using an inhibited blend of citric acid and effective corrosion inhibitor that will readily clean and scale removal like calcium carbonate, iron and copper oxides from Chiller, heat exchangers and boilers.

3. Hazards Identification

Emergency Overview

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (irritant, corrosive), of inhalation.

Potential Health Effects

HMS: Health 2 Flammability 0 Reactivity 0 Personal Protection: E

4 = extreme 3 = high 2 = moderate 1 = slight

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.



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4. Chemical Composition

Ingredient	CAS No	Percent
Citric Acid	77 - 92 - 9	20 - 50
Benzotriazole	95 - 14 - 7	0.2 - 1
Water	7732 - 18 - 5	To 100

5. Physical and Chemical Properties

Appearance	Clear Colourless to pale yellowish liquid
Odour	Characteristic
pH (1%) at 25 °C	2- 4

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 Extinguishing Media: Use Water, carbon dioxide, foam or dry powder.

Hazardous combustion products: Thermal decomposition of this product produces irritating vapors and toxic gases (e.g. sulfur dioxide)

8. Accidental Release Measures

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

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.



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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.

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.

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

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

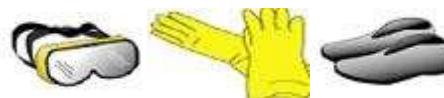
For information on product shelf life, please review labels on container.

10. Exposure Controls/Personal Protection

Exposure Guidelines

No exposure guidelines have been established. ACGIH, NIOSH and OSHA have not developed exposure limits for this product. The exposure limits given below are for particulates not otherwise classified: ACGIH: 10 mg/m³ TWA (Total Inhalable fraction); 3 mg/m³ TWA (Respirable fraction) OSHA: 15 mg/m³ TWA (Total dust); 5 mg/m³ TWA (Respirable Fraction)

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

Chemical Stability: Product is normally stable.

Chemical Stability: Conditions to Avoid strong alkali, oxidizing agent.

Incompatibility: Reactive with oxidizing agents, reducing agents, metals, alkalis.

Corrosive in presence of aluminum, of zinc, of copper. Non-corrosive in presence of glass.

Polymerization: Hazardous polymerization does not occur

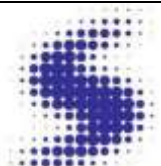
12. Toxicological and ecological information

Acute and Chronic Toxicity

Citric acid: Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 3000 mg/kg [Rat].

Chronic Effects on Humans: May cause damage to the following organs: teeth.



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Other Toxic Effects on Humans: Hazardous in case of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion.

Special Remarks on Toxicity to Animals: LDL[Rabbit] - Route: oral; Dose: 7000mg/kg

Special Remarks

Benzotriazole: ORAL (LD50): Acute: 560 mg/kg [Rat]. 615 mg/kg [Mouse]. 500 mg/kg [Guinea pig]. DERMAL (LD50): Acute: >1000 mg/kg [Rat]. DUST (LC50): Acute: 1910 mg/m 3 hours [Rat].

ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

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

International Transportation Regulations

Proper Shipping Name: CMC 5030

Hazard Class: 8

Packing Group: III

15. Other Information

Federal and State Regulations: TSCA 8(b) inventory: Citric acid

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications: WHMIS (Canada): CLASS E: Corrosive solid.

DSCL (EEC):

R36/37/38- Irritating to eyes, respiratory system and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39- Wear suitable gloves and eye/face protection.

16. Packing

Packaging type: HDPE container and sealed cap.

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