

SAFETY DATA SHEET

K-BIO PCMX

Section 1. Identification

GHS product identifier: K-BIO® PCMX
Other means of Identification: 4-Chloro-3, 5-xylenol; p-Chloro-m-Xylenol; Benzylol; 2-Chloro-5-hydroxy-1, 3-dimethylbenzene; 4-Chloro-1-hydroxy-3,5-dimethylbenzene; 2-Chloro-5-hydroxy-m-xylene; Chloro-xylenol; 2-Chloro-m-xylenol; 4-Chloro-3,5-xylenol; PCMX;
Product type: Liquid
Material uses: Preservative.
Supplier's details: CDI co. Ltd.
Emergency Contact: +82 31 366 3588 + 65-7737948

Section 2. Hazards identification

HAZCOM Standard Status: Classification according to Regulation (EC) No 1272/2008

Hazard pictograms:

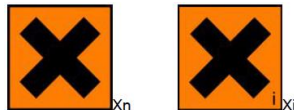


Signal word: Warning

Hazard statements:
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H333 May be harmful inhaled.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

HAZCOM Standard Status: Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Hazard pictograms:



Signal word: Warning

Risk Phrases: R22, R36/38, R43

Safety Phrases: S24, S37

Potential Health Effects

Eye: Causes moderate eye irritation
Skin: Causes skin irritation. May cause an allergic reaction in certain individuals.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation: Causes irritation of the mucous membrane and upper respiratory tract.
Chronic: Animal studies have reported that fetal effects/abnormalities may occur when maternal toxicity is seen. Laboratory experiments have resulted in mutagenic effects.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Ingredient name	%	CAS number
4-Chloro-3, 5-Dimethylphenol	98.5	88-04-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
 There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.
 Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
After Skin contact:	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Ingestion:	Do not induce vomiting. If victim is conscious and alert, give 2-4 cup full of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Note to Physician:	Therapeutically measures: basic help, decontamination, symptomatic treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: carbon dioxide (CO₂), extinguishing powder, water spray, or appropriate foam.

Unsuitable extinguishing media:

Unsuitable extinguishing media: None known.

Special protective actions for fire-fighters:

As in any fire, do not inhale explosion gases or combustion gases, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up:

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Precautions for safe handling

Protective measures:

Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization to this product should not be employed in any process in which this product is used.

Conditions for safe storage:

Keep container tightly closed. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8. Exposure controls/personal protection

General protective and hygienic measures

The usual precautionary measures should be adhered to general rules for handling chemicals.

Use adequate ventilation to keep airborne concentrations low.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety.

Personal Protection

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection:

A respiratory protection program that meets OSHA's 29 CFR 1920.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Skin protection:

Wear chemical-protective gloves with CE-labeling of category III (EN 374) to prevent skin exposure.

Eye/face protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Section 9. Physical and chemical properties

Physical state:	Crystal
Appearance:	White to off-white crystal
Odor:	Phenol-like
Odor threshold:	Not Available
pH:	Not available
Boiling Point:	Not available
Melting point:	113.5-116 °C
Flash point:	Not available
Evaporation Rate:	Not available
Explosion limits:	Not available
Vapor pressure:	Not available
Specific Gravity:	Not available
Solubility in Water:	Slightly soluble (0.03wt%) in water, freely soluble in organic solvent such as alcohol, ether, polyglycols, etc.
Partition coefficient: n- octanol/water:	Not available
Vapor density:	Not available
Viscosity:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available

Section 10. Stability and reactivity

Chemical stability:	Stable at room temperature in closed container under normal storage. Stable if used according to specifications. Volatile in steam.
Conditions to avoid:	Incompatible materials (e.g. strong bases, oxidizing agents) Ignition sources Dust generation Excess heat
Hazardous Polymerization:	Not occur.
Hazardous decomposition Products:	Carbon monoxide, carbon dioxide, hydrogen chloride. Irritating and toxic fumes and gases.

Section 11. Toxicological information

Draize test:	Rabbit: 100mg, moderate effect
Oral Test:	Rat: LD50 = 3830 mg/kg
Carcinogenicity:	Not listed by ACGIH, IARC, or NTP.
Other:	See actual entry in RTECS for complete information.

Section 12. Ecological information

Ecotoxicity

Microtox test

Rainbow trout:	LC50=0.77mg/L, 96Hr
Bluegill/Sunfish:	LC50=2.7mg/L, 96Hr
Flea Daphnia:	EC50 =4.5-7.7 mg/L, 48 Hr
Phytobacterium phosphoreum:	EC50=1.99mg/L, 5min

Section 13. Disposal considerations

Disposal methods: Remove according to local authority recommendations, e.g. dispose of in a manner consistent with federal, state, and local regulations.

Section 14. Transport information

Regulatory Information	UN Number	Proper Shipping Name	Classes	PG*	Label	Additional Information
DOT Classification	UN3077	Environmentally hazardous substance, solid, n.o.s.	9	III		
IMDG Class	UN3077	Environmentally hazardous substance, solid, n.o.s.	9	III		
IATA-DGR Class	UN3077	Environmentally hazardous substance, solid, n.o.s.	9	III		

PG*: Packing group

Section 15. Regulatory information

European/International Regulations: European Labeling in Accordance with EC Directives

Hazard Symbols: Xn, Xi
Risk Phrases: R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.
R 43 May cause sensitization by skin contact.

Safety Phrases: S 24 Avoid contact with skin.
S 37 Wear suitable gloves

WGK (Water Danger/Protection): No information available.

Canada: CAS No. 88-04-0 is listed on Canada's DSL List.

US FENERAL: CAS No. 88-04-0 is not listed on Canada's Ingredient Disclosure List.

Section 16. Other information

Notice to reader

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of CDI Corporation. The information in this SDS relates only to the specific material designated herein. CDI Corporation assumes no legal responsibility for use of or reliance upon the information in this SDS.

Abbreviations and acronyms:

REACH: Registration Evaluation, Authorization and Restriction of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
EINECS: European Inventory of Existing Commercial Chemical Substances
NIOSH: National Institute for Occupational Safety and Health
MSHA: Mine Safety and Health Administration
OSHA: Occupational Safety & Health Administration
LD50: Lethal dose, 50 percent
ACGIH: American Conference of Governmental Industrial Hygienists
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
RTECS: Registry of Toxic Effects of Chemical Substances
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"
IATA-DGR: International Air Transport Association – Dangerous Goods Regulation
IMO: International Maritime Organization

IMDG: International Maritime Dangerous Goods

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

RID: Regulation Concerning the International Carriage of Dangerous Goods by Rail