Canada Colors and Chemicals Limited

152 Kennedy Road South
Brampton, Ontario
Canada
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General Inquiry Number: (905) 459-1232

Material Safety Data Sheet Attached

Nantong Uniphos Chemicals Co., Ltd.

No. 8, Tonghai 2nd Road
Rudong Coastal Economic Development Zone, Nantong 226407, China
Tel.: +86-513-8190 3888 Fax: +86-513-8195 3355

Safety Data Sheet

This product is distributed by
Canada Colors and Chemicals Limited
General Inquiry: (905) 459-1232
24 Hour Emergency: (416) 444-2112
CCC: Product Code: 960105
CCC: Product Name: PBTC XF-210

1. Identification

1.1 Product Identifier

Trade Name	XF-210(PBTC) Deflocculant & Sequestrant
Chemical Name	2-Phosphonobutane-1,2, 4-tricarboxylic acid

1.2 Recommended use of the Chemical and Restrictions on use

Recommended Use	XF-210(PBTC) is widely used in industry as a sequestering agent and calcium carbonate scale inhibitor for applications in industrial water treatment and industrial cleaning.
Restrictions on use	None known

1.3 Supplier's Details

Company Name	Nantong Uniphos Chemicals Co., Ltd.
Address	No. 8, Tonghai 2nd Road Rudong Coastal Economic Development Zone, Nantong 226407, China
Telephone NO.	+86-513-8190 3888

1.4 Emergency Telephone Number

Telephone NO.	+86-513-8195 3398

2. Hazards Identification

2.1 Classifications of the substance

Hazard Category (GHS)	Skin corrosion / Irritation	Category 1
	Serious eye damage / eye irritation	Category 1
	Acute Toxity - Oral	Category 5
	Acute Toxity - Dermal	Category 5
	Acute Toxity - Inhalation	Category 5

2.2 Label Elements

Symbol	

Signal Word	Danger!	
Hazard Statement	**H314**	Cause severe skin burns and eye damage!
	H318	Cause serious eye damage!
	H303	May be harmful if swallowed.
	H313	May be harmful in contact with skin.
	H333	May be harmful if inhaled.

2.3 Precautionary Statement

Prevention

P260	Do not breathe dusts or mists.
P264	Wash hands and contaminated body thoroughly after handling.
P280	Wear protective gloves/clothing, eye protection and face protection.

Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin (or hair) with water/shower for 15 minutes at least.
P363	Wash contaminated clothing before reuse
P310	Immediately call a POISON CENTRE 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.

Storage

P405	Store locked up.

Disposal

P501	Dispose of contents / container in accordance with local / regional / national / international regulations.

3. Composition / Information on ingredients

Ingredients(Chemical Name)	CAS NO.	Concentration Range
2-phosphonobutane-1, 2, 4-tricarboxylic acid	37971-36-1	48.0-52.0 %
phosphorous acid	13598-36-2	< 1.0 %
Phosphoric acid	7664-38-2	≤ 0.2 %
Water	7732-18-5	remained
Total		**100%**

4. First-aid measures

4.1 Description of first-aid measures

General Advice	Immediate medical attention is not required; Movement of the exposed individual from the area to fresh air is recommended; Removal and handling of clothing & shoes from the individual is recommended; PPE(Personal

	Protective Equipment) for first-aid is recommended;
Eye Contact	Flush immediately with plenty of water. If easy to do, remove any contact lenses. Obtain medical attention if irritating persists. Remove material from skin and clothing.
Skin Contact	Immediately flush with plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention. Wash clothing before reuse.
Inhalation	Remove patient to fresh air. If not breathing, give artificial respiration. If breathing is difficulty, give oxygen. Remove material from eyes, skin and clothing.
If swallowed	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention. Contact a Poison Control Center for advice. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
No data available

4.3 Indication of any immediate medical attention and special treatment needed
No special measures are required

5. Fire-fighting Measures

5.1 Suitable Extinguishing Media
Water spray, foam, dry chemical, or carbon dioxide

5.2 Unsuitable Extinguishing Media
None known

5.3 Specific hazards arising from the chemical
Carbon monoxide (CO), phosphorus oxides (PxOy)

5.4 Special protective actions for fire-fighters
Firefighters, and others exposed, wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid contact with the substance. Use personal protection recommended in section 8.

6.2 Environmental Precautions
Keep away from drains and water courses.

6.3 Methods and material for containment and cleaning up
6.3.1 Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal.

6.3.2 Absorb remaining material or small spills with an inert material and then place in a chemical waste container.

6.3.3 Neutralize washings with soda ash or lime. Flush spill area with water.

7. Handling and Storage

7.1 Precautions for safe handling
Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Keep container closed. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
7.2.1 Requirements for storerooms and containers
Store container tightly closed in a dry and cool place.
Storage temperature > -10 °C; Shelf life: > 24 months.
Qualified materials: Glass lining, PVC, polypropylene, glass reinforced plastic or polyethylene
Unsuitable materials: mild steel, aluminum or any other metals

7.2.2 Further details
Containers will enclose product residues and vapors after being emptied. Dispose of in accordance with the regulations.

7.2.3 Storage class
8B = Non-combustible corrosive substances

8. Exposure Controls / Personal Protection

8.1 Appropriate engineering controls
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Use mechanical handling to reduce human contact with the materials.

8.2 Individual protection measures

Hand Protection	**Minimize skin contamination by following good industrial practice.** Wearing protective gloves is recommended. Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.
Eye protection	Wear chemical goggles. Have eye flushing equipment available.
Skin Protection	**Minimize skin contamination by following good industrial practice.** Wash contaminated skin thoroughly after handling.
Respiratory Protection	This material is not likely to present an airborne exposure concern under normal conditions of use. Avoid breathing vapor or mist. Use approved respiratory protection equipment (full facepiece recommended) when airborne exposure is excessive. If used, full facepiece replaces the need for face shield and/or chemical goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

9. Physical and chemical properties

Appearance	Clear colorless to light yellow liquid
Odour	Characteristic
Odour threshold	Not available
pH (1% solution) @ 25℃	1.0-2.0
Melting point/Freezing point	-15℃
Initial Boiling point and boiling range	≥100℃
Flash Point	Not available
Evaporation rate	Not available
Flammability	Not flammable
Flammability: Lower/Upper	Not flammable
Explosive Limits: Lower/ Upper	Not explosive
Vapour pressure	Not available
Vapour density	Not available
Relative density(water = 1) @ 20℃	1.27 – 1.30
Solubility	Soluble
Partition coefficient: n-octanol / water	Not available
Auto-ignition Temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and Reactivity

Reactivity	May be corrosive to metals.
Chemical Stability	Stable under normal temperatures and pressures.
Possibility of Hazardous reaction	Hazardous polymerization does not occur. May react with alkalis and many metals.
Conditions to Avoid	Do not expose to extreme temperatures.
Incompatible Materials	Strong oxidizing agents. Aluminum and mild steel.
Hazardous Decomposition Products	Carbon monoxide (CO), phosphorus oxides (PxOy)

11. Toxicological information

Acute Toxicity

Test	**Results**	**Basis**
Oral Toxicity (Rats)	May be harmful if swallowed.	LD 50, >2,000 mg/Kg
Dermal Toxicity (Rats)	May be harmful in contact with skin.	LD 50, >2,000 mg/Kg
Inhalation Toxicity, Vapor (Rats)	May be harmful if inhaled.	LD 50, >2,000 mg/Kg

Other Information

Items	**Results**
Skin corrosion / Irritation	Cause severe skin burns.
Serious eye damage / Irritation	Causes serious eye damage.
Respiratory or skin sensitization	Can cause respiratory tract injury leading to lung edema.
Germ cell mutagenicity	None available
Carcinogenicity	None available.
Reproductive toxicity	None available.
STOT-Single exposure	None available.
STOT-repeated exposure	None available.
Aspiration hazard	None available.

12. Ecological Information

Toxicity	**Invertebrates**	24h EC50	Daphnia magna	> 265mg/L
	Fish	48h LC50	Rainbow trout	> 3,440 mg/L
	Fish	48h	Golden orfe (Leuciscus idus)	> 500 mg/L
	Algae	72h EC50	Scenedesmus subspicatus	140mg/L
	Algae	96h EC50	Algae	860mg/L
	Biodegradation	Zahn-Wellens (OECD 302B) 17%		28 D
Persistence and degradability	The total of the organic components contained in the product is not classified as "readily biodegradable" (OECD-301 A-F). However, this product is expected to be inherently biodegradable.			
Bio-accumulative potential	There is no evidence to suggest bioaccumulation will occur.			

Mobility in soil	Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.
Other adverse effects	Do not empty into drains. Not readily biodegradable.

13. Disposal considerations

Product

Waste key number

20 01 29* = Detergents containing dangerous substances
* = Evidence for disposal must be provided.

Recommendation

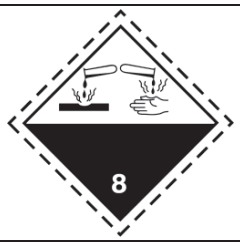
Special waste. Dispose of waste according to applicable legislation.
Product may not be released into water without pre-treatment (biological sewage plant).

Contaminated packaging

Recommendation

Containers will enclose product residues and vapours after being emptied.
Dispose of waste according to applicable legislation.
Handle contaminated packages in the same way as the substance itself.

14. Transport Information

UN NO.	3265
UN Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. 2-PHOSPHONOBUTANE-1,2,4-TRICARBOXYLIC ACID
Transport Hazard Class	8
Packing Group	III
Environmental hazards	Not a Marine Pollutant
Transport label	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code. No data available	

15. Regulatory Information

National Regulations	U.S. TSCA, Canadian DSL, EU EINECS, Japanese ENCS, Australian AICS, Korean, Chinese, Philippine PICCS
Other chemical inventory information	One or more of this product's components is considered to be an impurity and is not subject to the New Substances Notification Regulation under the Canadian Environmental Protection Act (CEPA).
Canadian WHMIS Classification	D2(B) – Materials Causing Other Toxic Effects E – Corrosion Material
SARA Hazard Notification	Hazard Categories Under Title III Immediate Rules (40 CFR 370) Section 302 Extremely Hazardous Substances: Not applicable Section 313 Toxic Chemical(s): Not applicable CERCLA Reportable Quantity: Not applicable This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Regulation. Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification. Safety data sheet also created in accordance with Brazilian law NBR 14725.

16. Other Information

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