



# Uniphos Chemicals

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## Safety Data Sheet

### 1. Identification

#### 1.1 Product Identifier:

<b>Trade Name:</b>	XF-993D (DBNPA 20%) Biocides & Preservatives
<b>Chemical Name</b>	2, 2 Dibromo-3-Nitrilopropionamide

#### 1.2 Recommended use of the Chemical and Restrictions on use:

<b>Recommended Use</b>	Used to control microbial, fungal and algal growth in industrial water systems such as cooling towers and evaporative condensers, pulp and paper mill effluents, oil-recovery systems, metal-cutting coolants, air-conditioning systems (effective against Legionnaire's Disease).
<b>Restrictions on use</b>	None known

#### 1.3 Supplier's Details

<b>Company Name</b>	Nantong Uniphos Chemicals Co., Ltd.
<b>Address</b>	No. 8, Tonghai 2nd Road Rudong Coastal Economic Development Zone, Nantong 226407, China
<b>Telephone NO.</b>	+86-513-6990 8111

#### 1.4 Emergency Telephone Number

<b>Telephone NO.</b>	+86-519-8386 0599
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### 2. Hazards Identification

#### 2.1 Classifications of the substance:

Acute toxicity- Oral	Category 5
Acute toxicity- Dermal	Category 5
Acute toxicity- Inhalation	Category 5
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Long-term hazards to the aquatic environment	Category 2

#### 2.2 Label Elements

<b>Symbol</b>	
<b>Signal Word</b>	Warning!

<b>Hazard Statement</b>	<b>H303</b>	May be harmful if swallowed
	<b>H313</b>	May be harmful in contact with skin
	<b>H333</b>	May be harmful if inhaled.
	<b>H315</b>	Cause skin irritation !
	<b>H317</b>	May cause an allergic skin reaction.
	<b>H319</b>	Causes serious eye irritation.
	<b>H411</b>	Toxic to the aquatic life with long lasting effects.

### 2.3 Precautionary Statement

<b>Prevention</b>	
<b>P261</b>	Avoid breathing dust/fumes/gas/mist/vapors/spray.
<b>P264</b>	Wash hands and contaminated body thoroughly after handling.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
<b>P273</b>	Avoid release to the environment.
<b>P280</b>	Wear protective gloves/clothing, eye protection and face protection.
<b>Response</b>	
<b>P301+P302+P304 +P312+P330+P352</b>	IF SWALLOWED, ON SKIN or INHALED: Rinse mouth. Wash skin with plenty of soap and water. Call a POISON CENTER/doctor /physician if you feel unwell.
<b>P321</b>	Specific treatment if immediate administration of antidote is required.
<b>P333+ P337+P313</b>	If skin irritation/rash occurs or eye irritation persists: Get medical advice / attention.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses ,if present and easy to do. Continue rinsing.
<b>P362</b>	Take off contaminated clothing and wash before reuse.
<b>P391</b>	Collect spillage.
<b>Storage</b>	
<b>P405</b>	Store locked up.
<b>Disposal</b>	
<b>P501</b>	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, 2 Dibromo-3-nitrilopropionamide	10222-01-2	20.00 – 22.00%
Water	7732-18-5	20-25%
Proprietary	N/A	55-65%
<b>Total</b>		<b>100%</b>

## 4. First-aid measures

### 4.1 Description of first-aid measures

<b>General Advice</b>	Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident. Immediately remove any clothing soiled by the product.
<b>Eye Contact</b>	Rinse opened eye for several minutes under running water. Then consult a doctor.
<b>Skin Contact</b>	Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention immediately.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician immediately.
<b>If swallowed</b>	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. NOTE: Never give an unconscious person anything to drink.
<b>Notes to Physician</b>	Corrosive to eyes. In case of ingestion do not induce vomiting. No specific antidote. Treat symptomatically and supportively.

### 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

Carbon dioxide, dry chemicals, foam, water spray (fog).  
Cool containers with water spray

### 5.2 Unsuitable Extinguishing Media

None known

### 5.3 Specific hazards arising from the chemical

Dust may form a weak explosive mixture with air (class St1), but is not sensitive to ignition from electrostatic discharges. Will decompose from ca. 160°C releasing poisonous and corrosive fumes of HBr, Br<sub>2</sub> and NO<sub>x</sub>.

### 5.4 Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode.  
Do not inhale combustion vapors.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation Avoid formation of dust. Wear protective equipment. Keep unprotected persons away. Do not smoke - keep ignition sources away

## 6.2 Environmental Precautions

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to penetrate the ground/soil.

Inform responsible authorities in case of seepage into the ground.

## 6.3 Methods and material for containment and cleaning up

6.3.1 Ensure adequate ventilation.

6.3.2 Avoid dust formation absolutely.

6.3.3 If necessary pick up with a tested and approved industrial vacuum cleaner.

6.3.4 Send for recovery or disposal in suitable receptacles.

6.3.5 Dispose contaminated material as waste according to item 13

## 7. Handling and Storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Prevent formation of dust. Any deposit of dust which cannot be avoided must be regularly removed. Avoid inhalation and ingestion.

Dust can combine with air to form an explosive mixture. Keep ignition sources away - Do not smoke. Protect against electrostatic charges

### 7.2 Conditions for safe storage, including any incompatibilities

#### 7.2.1 Requirements for storerooms and containers:

Store container tightly sealed at a cool and dry place with sufficient ventilation.

Store away from foodstuffs, oxidizing agents and flammable materials.

#### 7.2.2 Further details:

Keep receptacle tightly sealed.

## 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. Keep away from open flames and other ignition sources. Protect against electrostatic charges.

### 8.2 Individual protection measures

<b>General</b>	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not inhale dust / smoke / mist. Vacuum clean contaminated clothing. Do not blow or brush off contamination.
<b>Hand Protection</b>	Wash hands before breaks and at the end of work. Wear Protective gloves(Check protective gloves for proper condition before use). To avoid skin problems reduce the wearing of gloves to the required minimum. Preventive skin protection by using skin-protecting agents is recommended. After use of gloves apply skin-cleaning agents and skin cosmetics.
<b>Eye protection</b>	Wear tightly sealed chemical safety goggles & Avoid contact with the eyes.

<b>Skin Protection</b>	Wear protective work clothing & Avoid contact with the skin. Use skin protection cream for skin protection.
<b>Respiratory Protection</b>	Wear approved full-face piece airline respirator in the positive pressure mode with emergency case provisions.
<b>Hygiene measures:</b>	Safety shower and eye bath should be provided. Do not eat, drink or smoke until after-work shower and changing clothes.

## 9. Physical and chemical properties

<b>Appearance</b>	Clear yellow liquid
<b>Odour:</b>	Not available
<b>Odour threshold</b>	Not available
<b>pH (as is)</b>	2.0-5.0
<b>Melting point/Freezing point:</b>	Not available
<b>Initial Boiling point and boiling range</b>	Not available
<b>Flash Point:</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Flammability</b>	Product is not flammable.
<b>Danger of explosion:</b>	Not available
<b>Flammability :Upper</b>	Not available
<b>Flammability: Lower</b>	Not available
<b>Thermal decomposition</b>	From 160°C
<b>Explosive Limits: Upper</b>	Not explosive
<b>Explosive Limits: Lower</b>	Not explosive
<b>Vapour pressure</b>	Not available
<b>Vapour density</b>	Not available
<b>Specific gravity</b>	1.20-1.30
<b>Solubility at 25.0°C</b>	Soluble
<b>Partition coefficient: n-octanol / water</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available

## 10. Stability and Reactivity

<b>Reactivity</b>	Not available
<b>Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>Possibility of Hazardous reaction</b>	No dangerous reactions known
<b>Conditions to Avoid</b>	Oxidizing agents, reducing agents, alkali, acid chlorides, acid anhydrides.
<b>Incompatible Materials</b>	Exposure to light; Heating
<b>Hazardous Decomposition Products</b>	Br <sub>2</sub> , HBr, NO <sub>x</sub> .

## 11. Toxicological information

### Acute Toxicity:

Test	Results	Basis
Oral Toxicity (Rats)	LD <sub>50</sub> ≥2.0g/kg	Product Test Data
Dermal Toxicity (Rats)	LD <sub>50</sub> ≥2.0g/kg	Product Test Data
Inhalation Toxicity, Vapor (Rats)	LD <sub>50</sub> ≥2.0g/kg	Product Test Data

### Other information

Items	Results
<b>Skin corrosion / Irritation</b>	Cause skin irritation!
<b>Serious eye damage / Irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Not available
<b>Carcinogenicity</b>	Not available
<b>Reproductive toxicity</b>	Not available
<b>STOT-Single exposure</b>	Not available
<b>STOT-repeated exposure</b>	Not available
<b>Aspiration hazard</b>	Not available
<b>Summary Comments:</b> Component A may have a drying effect on the skin; frequent or prolonged contact may cause flaking or cracking of the skin.	

## 12. Ecological Information

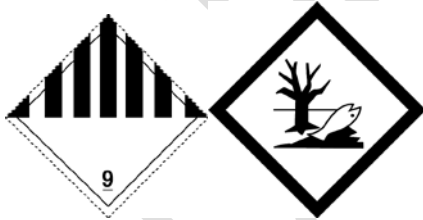
Below data are acquired from solid DBNPA.

<b>Toxicity :</b>	Fish(Rainbow trout)	LC50, 96H, 2.3mg/kg;
	Fish(Fathead minnow)	LC50, 96H, 1.8-2.2mg/kg;
	Fish(Sheepshead minnow)	LC50, 96H, 3.3mg/kg;
	Fish (Bluegill sunfish)	LC50, 96H, 2.3mg/kg;
	Fish (Mysid shrimp)	LC50, 96H, 0.72mg/kg;
	Fish (Eastern oyster)	LC50, 96H, 0.37mg/kg;
	Avian(bobwhite quail)-Oral	LD50, 48H, 354 mg/kg
	Avian(Mallard duck)-Dietary	>5620 ppm
<b>Toxicity :</b>	Invertebrate(Daphnia magna)	LC50, 96H, 0.66mg/L;
	Green algae(selenastrum capricornutum)	EC 50, 0.30mg/L
<b>Bioaccumulative potential</b>	None Available.	
<b>Mobility in soil:</b>	None Available.	
<b>Other adverse effects:</b>	Product contains organic halogens, may contribute to AOX. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.	

## 13. Disposal considerations

<b>General</b>	Consult the local environmental protection department. This product must be specially treated adhering to official regulations. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways. This product must not be disposed of together with household garbage.
<b>Miscellaneous advice</b>	Local, State, Provincial and national disposal regulations may be more or less stringent. Consult your attorney or appropriate regulatory officials for information on such disposal.

## 14. Transport Information

<b>UN NO.:</b>	3082
<b>UN Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S 2, 2 DIBROMO-3-NITRILOPROPIONAMIDE
<b>Transport Hazard Class</b>	9
<b>Packing Group:</b>	III
<b>Environmental hazards</b>	Yes
<b>Transport label:</b>	
<b>Transport in bulk according to Annex II of MARPOL 73/78</b> No data available.	

## 15. Regulatory Information

All components are on chemical inventory of U.S. TSCA, Canadian DSL, EU EINECS, Japanese ENCS, Australian AICS, Korean, Chinese, Philippine PICCS.

## 16. Other Information

<b>Prepared by</b>	Nantong Uniphos Chemicals Co., Ltd. No. 8, Tonghai 2nd Road Rudong Coastal Economic Development Zone, Nantong 226407, China Tel.: +86-513-6990 8111 Fax: +86-513-6990 8155
<b>Date</b>	Oct.1st,2017

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