

Material Safety Data Sheet

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BASF CORPORATION  
 3000 CONTINENTAL DRIVE NORTH

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EMERGENCY TELEPHONE: (800) 424-9300 CHEMTREC  
 (800) 832-HELP (BASF Hotline)

BOTH NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, & HOLIDAYS.

SECTION 1 - PRODUCT INFORMATION

HYDROXYL AMMONIUM SULFATE 30% SOLUTION

Product ID: NCI 584900

Common Chemical Name:

Hydroxylamine, Sulfate (2:1)(Salt)

Synonyms:

HAS Solution

Molecular Formula:

(NH3OH)2SO(4)

Chemical Family: Inorganic Salt

Molecular Wt.: 164.2

SECTION 2 - INGREDIENTS

Chemical Name:	CAS	Amount	
Hydroxylamine Sulfate	10039-54-0	30.0	%
PEL/TLV NOT ESTABLISHED			
Water	7732-18-5	70.0	%
PEL/TLV NOT ESTABLISHED			

SECTION 3 - PHYSICAL PROPERTIES

Color:	Colorless				
Form/Appearance:	Solution				
Odor:	NOT AVAILABLE				
	Typical	Low/High	U.O.M.		
Specific Gravity:	NOT AVAILABLE				
pH:	1.2		SU		
	Typical	Low/High	Deg.	@	Pressure
Boiling Pt:	102		C	1	ATMOSPHERES
Freezing Pt:	NOT AVAILABLE				
Decomp. Tmp:	NOT AVAILABLE				
Solubility in Water Description:	Soluble				

SECTION 4 - FIRE AND EXPLOSION DATA

	Typical	Low/High	Deg.	Method
Flash Point:	NOT AVAILABLE			
Autoignition:	NOT AVAILABLE			

SECTION 4 - FIRE AND EXPLOSION DATA (cont)

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Extinguishing Media:

Use water fog extinguishing media. Use flooding amounts of water in early stages of fire.

Fire Fighting Procedures:

Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Unusual Hazards:

Do not allow water solution to evaporate. Flood with water. Hydroxylammonium sulfate decomposes exothermically above 180 C with a violent gas evolution.

SECTION 5 - HEALTH EFFECTS

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Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Toxicology Test Data:

Rat, Oral LD50 - 642 MG/KG  
Moderately Toxic  
Rabbit, Dermal LD50 - 1500 - 2000 MG/KG  
Moderately Toxic  
Rabbit, Primary Skin Irritation -  
Irritating  
Rabbit, Eye Irritation -  
Irritating  
Rat, Inhalation Safety Screen, 8 hr -  
Not lethal, sat vapor, room temp.  
Data for hydroxylammonium sulfate (salt) -  
Neither embryotoxic nor teratogenic  
Sensitizing potential -  
Sensitizer

Acute Overexposure Effects:

Contact with the liquid results in severe irritation. Burns and permanent eye injury may result. Overexposure to hydroxylamine salts may result in the formation of methemoglobin or hemolytic anemia, which reduces the ability of the blood to carry oxygen.

Chronic Overexposure Effects:

In a 2-year drinking water study of hydroxylammonium sulfate using Wistar rats, hemolytic anemia (a condition indicated by an inadequate number of circulating red blood cells) and angiomatous hyperplasia in the spleen were observed in male and female rats at the highest dose level (80 ppm). An increase in the incidence of hemangiosarcomas (a tumor of the vascular tissue) was also observed in male and female rats. In female rats, an increase of hemangiomas was observed. Overexposure may result in sensitization, leading to allergic reactions.

First Aid Procedures - Skin:

Wash affected areas with water while removing contaminated clothing. Get immediate medical attention. Launder contaminated clothing before

SECTION 5 - HEALTH EFFECTS (cont)

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reuse.

First Aid Procedures - Eyes:

Flush with copious amounts of water for at least 15 minutes. Hold eyelids open to facilitate rinsing. Seek medical assistance immediately.

First Aid Procedures - Ingestion:

Do not induce vomiting. If conscious, give large amounts of water or milk. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

First Aid Procedures - Inhalation:

Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:

Contact the local Poison Control Center or call BASF Emergency Response at 1-800-832-HELP (4357).

First Aid Procedures - Aggravated Medical Conditions:

No data is available which addresses medical conditions that are generally recognized as being aggravated by exposure to this product. Please refer to the effects of overexposure section for effects (if any) observed in animals.

First Aid Procedures - Special Precautions:

Not applicable.

SECTION 6 - REACTIVITY DATA

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Stability Data:

Stable. Unstable at neutral or basic pH. Decomposes above 80 C.

Incompatibility:

Strong oxidizing agents, acids, bases; alcohols.  
Iron powders, caustic, nitrites, copper and zinc.

Conditions/Hazards to Avoid:

See Reactivity - Incompatibility section.

Hazardous Decomposition/Polymerization:

Hazardous decomposition products: NO<sub>x</sub> and SO<sub>x</sub>.  
Polymerization: Does not occur.

Corrosive Properties:

Corrosive to steel < 316 SS.

Oxidizer Properties:

Not an oxidizer

HYDROXYLAMMONIUM SALTS REACT WITH ALKALIES TO GIVE HYDROXYLAMINE, WHICH DECOMPOSES READILY. HYDROXYLAMMONIUM SALTS DECOMPOSE ON HEATING. PROGRESSIVE EXOTHERMIC SPONTANEOUS DECOMPOSITION MAY BE INITIATED BY THE ACTION OF LOCALIZED HEAT. REFER TO TECHNICAL BULLETIN FOR ADDITIONAL INFORMATION.

SECTION 7 - PERSONAL PROTECTION

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Clothing:

Gloves, coveralls, apron, and boots as necessary to prevent contact.

Eyes:

Chemical goggles; also wear a face shield if splashing hazard exists.

## SECTION 7 - PERSONAL PROTECTION (cont)

## Respiration:

If vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator or an air-supplied respirator as appropriate.

## Ventilation:

Use local exhaust to control vapors/mists.

## Explosion Proofing:

See Section 4 - Fire and Explosion Data.

## Other Personal Protection Data:

Eyewash fountains and safety showers must be easily accessible.

Shower after handling.

## SECTION 8 - SPILL-LEAK/ENVIRONMENTAL

## General:

Spills should be contained, solidified and placed in suitable containers for disposal in a RCRA licensed facility. This material is RCRA hazardous due to its properties.

## Waste Disposal:

Incinerate or bury in a RCRA licensed facility. Do not discharge into waterways or sewer systems without proper authority.

## Container Disposal:

Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing or other means to prevent unauthorized reuse. Other containers must be disposed of in a RCRA licensed facility.

## Environmental Toxicity Test Data:

Fathead Minnow, Static 96 hr LC50 - 7.2 MG/L

Moderately Toxic

Daphnid, Static 48 hr EC50 - 1.6 MG/L

Moderately Toxic

Acute Algal Toxicity, 72 hr. EC/LC50 - 0.72 MG/L

Highly Toxic

Inhibition of Activated Sludge - EC20 = 0.6 MG/L

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## SECTION 9 - STORAGE AND HANDLING

## General:

Keep containers closed.

Store materials to avoid sources of ignition and excessive heat.

## SECTION 10 - REGULATORY INFORMATION

## TSCA Inventory Status

Listed on Inventory: YES

## RCRA Haz. Waste No .:

CERCLA: NO Reportable Qty.: (If YES)

## State Regulatory Information: (By Component)

NJ/PA/MA RTK

CAS: 7732-18-5

NO

NAME: Water

CAS: 10039-54-0

NO

NAME: Hydroxylamine Sulfate

## SECTION 10 - REGULATORY INFORMATION (cont)

## Hazard Ratings:

	Health:	Fire:	Reactivity:	Special:
HMIS	2	0	0	NA
NFPA	2	0	0	NA

This product is hazardous or contains components which are hazardous according to the OSHA Hazard Communication Standard.

MASSACHUSETTS RIGHT-TO-KNOW LISTED: - YES: 7783-20-2, 7664-93-9

PENNSYLVANIA RIGHT-TO-KNOW LISTED: - YES

PENNA. ENVIRONMENTAL HAZARD: YES: 7783-20-2, 7664-93-9.

## SECTION 11 - TRANSPORTATION INFORMATION

## DOT Proper Shipping Name:

SEE BELOW

## DOT Technical Name:

SEE BELOW

## DOT Primary Hazard Class:

SEE BELOW

## DOT Secondary Hazard Class:

SEE BELOW

## DOT Label Required:

SEE BELOW

## DOT Placard Required:

SEE BELOW

## DOT Poison Constituent:

SEE BELOW

BASF Commodity Codes: NA NA UN/NA Code: E/R Guide:

## Bill of Lading Description:

HYDROXYLAMINE SULFATE SOLUTION 30%, 8, UN2865, PGI III

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