



Gujarat State Fertilizers & Chemicals Ltd.
P.O.: Fertilizernagar, 391750, Dist. Vadodara. GUJARAT, INDIA.

PRODUCT : HYDROXYLAMINE SULFATE CRYSTAL

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER	GUJARAT STATE FERTILIZERS & CHEMICALS LIMITED P.O.: FERTILIZER NAGAR, DIST.: VADODARA, INDIA. PIN: 391 750. Phone No.: 0265-3093535
PREPARED BY	SAFETY UNIT, GSFC LTD
PREPARATION DATE	08/08/2012, 1.7.2017, 19/6/2018, 1/6/2019
PRODUCT NAME	HYDROXYLAMINE SULFATE CRYSTAL
PRODUCT CODE CHEMICAL FORMULA	CAS NO.10039-54-0 (NH ₂ OH) ₂ . H ₂ SO ₄
MOLECULAR WEIGHT	164.14
CHEMICAL FAMILY	INORGANIC CHEMICAL
MATERIAL USE	A RAW MATERIAL FOR MANUFACTURING IN PHARMACEUTICALS, INSECTICIDES, ETC.

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	EXPOSURE LEVELS	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
CORROSIVE SOLID	NA	Oral: LD50: 910 mg/kg (gpg) LD50: 980 mg/kg (mus) LD50: 842 mg/kg (rat)	-

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY SKIN CONTACT	CAUSES SKIN IRRITATION. CAUSES SKIN BURNS. MAY CAUSE SKIN SENSITIZATION, AN ALLERGIC REACTION, WHICH BECOMES EVIDENT UPON RE- EXPOSURE TO THIS MATERIAL.
SKIN ABSORPTION EYE CONTACT	MAY BE ABSORBED THROUGH THE SKIN. CAUSES EYE BURN.



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INHALATION	MAY CAUSE METHEMOGLOBINEMIA, CYANOSIS (BLUISH ISCOLORATION OF SKIN DUE TO DEFICIENTOXYGENATION OF THE BLOOD), CONVULSIONS, TACHYCARDIA, DYSPNEA (LABORED BREATHING), AND DEATH. IRRITATION MAY LEAD TO CHEMICAL PNEUMONITIS AND PULMONARY EDEMA. MAY CAUSE SEVERE IRRITATION OF THE RESPIRATORY TRACT WITH SORE THROAT, COUGHING, SHORTNESS OF BREATH AND DELAYED LUNG EDEMA. CAUSES CHEMICAL BURNS TO THE RESPIRATORY TRACT.
INHALATION, CHRONIC	ABSORPTION INTO THE BODY LEADS TO THE FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATIONS CAUSES CYANOSIS (BLUISH DISCOLORATION OF SKIN DUE TO DEFICIENT OXYGENATION OF THE BLOOD).
INGESTION	HARMFUL IF SWALLOWED. CAUSES GASTROINTESTINAL TRACT BURNS. MAY CAUSE SEVERE GASTROINTESTINAL TRACT IRRITATION WITH NAUSEA, VOMITING AND POSSIBLE BURNS. MAY CAUSE METHEMOGLOBINEMIA, CYANOSIS (BLUISH DISCOLORATION OF SKIN DUE TO DEFICIENT OXYGENATION OF THE BLOOD), CONVULSIONS, AND DEATH.
EFFECTS OF ACUTE EXPOSURE	IRRITANT TO SKIN, EYES. INHALATION CUASES COUGHING.
EFFECTS OF CHRONIC EXPOSURE	ABSORPTION INTO THE BODY LEADS TO THE FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATIONS CAUSES CYANOSIS (BLUISH DISCOLORATION OF SKIN DUE TO DEFICIENT OXYGENATION OF THE BLOOD).

SECTION 04: FIRST AID MEASURES

INSTRUCTIONS:

SKIN CONTACT	GET MEDICAL AID. IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
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	IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2-4 CUPFULS OF MILK OR WATER. GET MEDICAL AID IMMEDIATELY.



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EYE CONTACT	RINSE WITH PLENTY OF WATER FOR 15 MINUTES HOLDING EYELIDS OPEN. GET MEDICAL AID IMMEDIATELY. ADMINISTER MEDICAL TREATMENT IMMEDIATELY IN ALL CASES.
NOTES TO PHYSICIAN	DIAGNOSTIC TEST: PIGMENTORY AND CARBOHYDRATE LEVER FUNCTION TESTS. (RISE OF UROBILINE IN URINE), ECG. SPECIAL HIGH RISK GROUPS: WOMEN, PREGNANT WOMEN.

SECTION 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS	NOT LISTED
FLAMMABILITY	NA
IF YES, UNDER WHICH CONDITIONS?	NA
EXTINGUISHING MEDIA	NA
SPECIAL PROCEDURES	NA
FLASH POINT (C) METHOD	NA
AUTO IGNITION TEMPERATURE	NOT PERTINENT
UPPER FLAMMABLE LIMIT(%BY VOL.)	NA
LOWER FLAMMABLE LIMIT(%BY VOL.)	NA
EXPLOSION DATA	
EXPLOSIVE POWER	NA
RATE OF BURNING	NA
SENSITIVITY TO STATIC DISCHARGE	NA
SENSITIVITY TO IMPACT	STABLE.
UNUSUAL FIRE AND EXPLOSION HAZARDS	POISONOUS GASES (SO _x , NO _x) MAY BE PRODUCED IN FIRE.
HAZARDOUS COMBUSTION PRODUCT	EMITS TOXIC FUMES OF SO _x , NO _x .

SECTION 06: ACCIDENTAL RELEASE MEASURES
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LEAK/SPILL	WEAR A SELF CONTAINED BREATHING APPARATUS AND APPROPRIATE PERSONAL PROTECTION (SEE EXPOSURE CONTROLS, PERSONAL PROTECTION SECTION). SWEEP UP, THEN PLACE INTO A SUITABLE CONTAINER FOR DISPOSAL. AVOID GENERATING DUSTY CONDITIONS. NOTIFY LOCAL HEALTH AND POLLUTION CONTROL AGENCIES.
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SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES	AND KEEP IN A COOL, DRY PLACE. KEEP CONTAINER TIGHTLY CLOSED.
EQUIPMENT	
STORAGE NEEDS	STORE IN HDPE BAGS IN A WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE SUBSTANCES.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

GLOVES/ TYPE	USE PVC/RUBBER HANDGLOVES FOR HAND PROTECTION.
RESPIRATORY/TYPE	USE DUST RESPIRATOR, SELF CONTAIN BREATHING APPARATUS SET.
EYE/TYPE	USE CHEMICAL SAFETY GOGGLES.
FOOTWEAR/TYPE	USE PVC/RUBBER SHOES/GUMBOOTS.
CLOTHING/TYPE	USE PVC/RUBBER APROAN.
ENGINEERING CONTROLS	USE LOCAL EXHAUST VENTILATION. FACILITIES STORING OR UTILIZING THIS MATERIAL SHOULD BE EQUIPPED WITH AN EYEWASH AND A SAFETY SHOWER FACILITY.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	CRYSTALLINE SOLID.
COLOUR	WHITE
MELTING POINT	170 °C
ODOUR ``	-
VAPOUR PRESSURE (MM HG)	NA
VAPOUR DENSITY (AIR = 1)	NA
EVAPORATION RATE	NA
BOILING POINT	NA
PH	NA
SPECIFIC GRAVITY(WATER = 1)	: NA
SOLUBILITY IN WATER	329 G/L WATER (20°C)
(% W/W)	
COEFFICIENT OF WATER/	NA
OIL DIST	
DECOMPOSITION TEMPERATURE	> 170°C.



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SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY	
YES	STABLE UNDER NORMAL CONDITIONS.
NO, WHICH CONDITION	
COMPATIBILITY WITH OTHER SUBSTANCES	YES, EXTREAMELY REACTIVE OR INCOMPATIBLE WITH OXIDIZING AGENT.
YES	
NO, WHICH ONES	
REACTIVITY CONDITIONS	NA
HAZARDOUS PRODUCTS OF DECOMPOSITION	NITROGEN OXIDES, SULFUR DIOXIDE
HAZARDOUS POLYMERIZATION	NA
DECOMPOSITION	

SECTION 11: TOXICOLOGY INFORMATION

EXPOSURE LIMIT OF MATERIAL	-
LC 50 OF MATERIAL, SPECIES & ROUTE	NA
LD 50 OF MATERIAL, SPECIES & ROUTE	ORAL: LD50: 910 MG/KG (GPG) LD50: 980 MG/KG (MUS) LD50: 842 MG/KG (RAT)
CARCINOGENICITY OF MATERIAL	NA
REPRODUCTIVE EFFECTS	NA
IRRITANCY OF MATERIAL	IRRITANT TO SKIN, EYES & MUCUS MEMBRAN.
SENSITIZING CAPABILITY OF MATERIAL	NA
SYNERGISTIC MATERIALS	NA



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SECTION 12: ECOLOGICAL CONSIDERATIONS

ENVIRONMENTAL TOXICITY
INFORMATION

FATHEAD MINNOW LC50 = 3.2-7.3MG/L/96H WATER
FLEA LC50 = 1.4MG/L/96H RAINBOW TROUT LC100 =
150MG/L/10MIN (AS HYDROXYLAMINE)
EFFECT OF LOW CONCENTRATIONS ON AQUATIC
LIFE IS UNKNOWN. MAY BE DANGEROUS IF IT
ENTERS WATER INTAKES. NOTIFY LOCAL HEALTH
AND WILDLIFE OFFICIALS. NOTIFY OPERATORS OF
NEARBY WATER INTAKES.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

SEND THE STREAM FOR BOD REDUCTION IN
EFFLUENT TREATMENT PLANT.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER

-

T.D.G.CLASSIFICATION

-

PACKING GROUP

-

SPECIAL SHIPPING
INSTRUCTIONS

TO BE PROTECTED FROM MOISTURE. STORAGE
TEMPERATURE <75 °C.

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION
CPR COMPLIANCE

NA
NA

SECTION 16: OTHER INFORMATION / DISCLAIMER

DISASTER MANAGEMENT, SWEEP UP SPILLED SUBSTANCE, WASH AWAY REMAINDER WITH
LARGE AMOUNT OF WATER. EXTINGUISH FIRE WITH WATER SPRAY AND DRY CHEMICAL
POWDER.

SOURCE USED

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Material Safety Data Sheet: