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FORMAMIDINE SULFINIC ACID

THIS MSDS COMPLIES WITH HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.

SECTION I. ----- PRODUCT IDENTIFICATION -----

GENERIC ID - REDUCING AGENT, FAS, THIOUREA DIOXIDE, TDO
CHEMICAL NAME: FORMAMIDINE SULFINIC ACID
CHEMICAL FAMILY: SULFINIC ACID
CHEMICAL FORMULA: $H_2NC(=NH)SO_2H$
CHEMICAL NAME: THIOUREA DIOXIDE, UN 3341

H.M.I.S. RATING
1 - HEALTH
0 - FLAMMABILITY
1 - REACTIVITY

SECTION II. ----- COMPONENTS -----

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION.

<u>INGREDIENT</u>	<u>% (BY WT)</u>	<u>NOTE</u>
FORMAMIDINE SULFINIC ACID C.A.S. #1758-73-2	100	(1)

(1) NO CARCINOGENICITY DESIGNATED BY NTP, IARC, OSHA, OR OTHERS. THERE IS NO EXPOSURE LIMITS ESTABLISHED FOR THIS PRODUCT. A PEL OF 15 MG/M3 AND TLV OF 10 MG/M3 FOR PARTICLES. THE RESPIRABLE FRACTION SHOULD NOT EXCEED 5 MG/M3.

SECTION III. ----- PHYSICAL DATA -----

<u>PROPERTY</u>	<u>REFINEMENT</u>	<u>MEASUREMENT</u>
BOILING POINT:	N/A	
VAPOR PRESSURE:	N/A	
SPECIFIC VAPOR DENSITY:	N/A	
SPECIFIC GRAVITY:		1.680 @ 25°C (H ₂ O=1)
PERCENT VOLATILES:	N/A	
MELTING POINT:		DECOMPOSES @ 253°F (SHORT TERM HEATING), @ 122°F (LONG TERM HEATING)
EVAPORATION RATE:	N/A	
SOLUBILITY IN WATER:		27G/L @ 68°F (20°C)
pH OF 1% SOL.:		4.0 @ 68°F (20°C)
APPEARANCE:		WHITE, CRYSTALLINE
STATE:		SOLID
FORM:		POWDER
ODOR:		NONE



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SECTION IV. ----- FIRE AND EXPLOSION INFORMATION -----

FLASH POINT: N/A
FLAMMABLE LIMITS: LOWER: NONE UPPER: NONE
EXPLOSIVE LIMIT: N/A
EXTINGUISHING MEDIA: USE PLENTY OF WATER TO DISSIPATE HEAT OF DECOMPOSITION.
HAZARDOUS DECOMPOSITION: MAY FORM TOXIC MATERIALS: OXIDES OF SULFUR AND AMMONIA.
FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE
PIECE OPERATED IN THE POSITIVE PRESSURE MODE. USE WATER SPRAY TO COOL CONTAINERS AND
DISPERSE VAPORS. KEEP SPILLS AWAY FROM SOURCES OF FIRE.

SECTION V. ----- HEALTH HAZARD DATA -----

<u>CHEMICAL NAME</u>	<u>TOXICITY DATA</u>	
	<u>LD 50</u>	<u>LC 50</u>
FORMAMIDINE SULFINIC	1120 MG/KG	NOT ESTABLISHED ORAL RATS

REPORT OF MUTAGENIC PROPERTIES AT HIGH DOSES (600MG/KG BODY WEIGHT) IN LAB ANIMALS.
PERMISSIBLE EXPOSURE LIMIT: NOT ESTABLISHED
EFFECTS OF ACUTE OVER EXPOSURE:
EYES: CAUSES BURNS. IMMEDIATELY FLUSH WITH PLENTY OF WATER. CALL PHYSICIAN.
INHALATION: CAN CAUSE IRRITATION TO THE MUCOUS MEMBRANES OF THE NASAL RESPIRATORY
SYSTEM. REMOVE TO FRESH AIR. CALL A PHYSICIAN.
SKIN: CAN CAUSE IRRITATION. FLUSH WITH PLENTY OF WATER, REMOVE EXPOSED CLOTHING. CALL
A PHYSICIAN IF IRRITATION PERSISTS.
SWALLOWING: SOME GASTROINTESTINAL IRRITATION AND NAUSEA. DO NOT INDUCE VOMITING.
IMMEDIATELY CALL A PHYSICIAN.
CHRONIC EFFECTS OF OVEREXPOSURE: NO LONG TERM EFFECTS ARE KNOWN.
OTHER HEALTH EFFECTS: CONJUNCTIVITIS OF THE EYES, DERMATITIS OF THE SKIN, ASTHMA AND
RESPIRATORY DISEASES CAN BE AGGRAVATED BY OVER EXPOSURE.

SECTION VI. ----- REACTIVITY DATA -----

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE
INCOMPATIBILITY: VIOLENT REACTION WITH STRONG OXIDIZING AGENTS AND ALKALIS. AVOID
CONTACT WITH EXCESSIVE HEAT AND MOISTURE.

SECTION VII. ----- SPILL OR LEAK PROCEDURES -----

ACTION TO BE TAKEN: SWEEP OR SHOVEL SOLIDS INTO PROPER CONTAINER FOR DISPOSAL IN
ACCORDANCE WITH APPLICABLE REGULATIONS.
DISPOSAL METHOD: THIS MATERIAL IS NON-HAZARDOUS (AS PER RCRA). DISPOSE OF WASTE IN AN
AUTHORIZED INDUSTRIAL LAND-FILL.
GENERAL: CERCLA/SARA REQUIRES NOTIFICATION TO FEDERAL STATE AND LOCAL AUTHORITIES OF
RELEASES OF HAZARDOUS QUANTITIES EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITIES
(RQ'S) IN 40 CFR 302.4 AND 40 CFR 35.5. THIS PRODUCT CONTAINS NO REPORTABLE QUANTITIES.
SARA TITLE 313: REQUIRES ANNUAL REPORTS OF RELEASES OF TOXIC CHEMICALS THAT APPEAR IN
40 CFR 372. COMPONENTS IN THIS PRODUCT DO NOT REQUIRE REPORTING UNDER THIS RULE.



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SECTION VIII. ----- PROTECTIVE EQUIPMENT -----

EYES: CHEMICAL GOGGLES OR FACE SHIELD

GLOVES: WEAR CHEMICAL RESISTANT GLOVES

RESPIRATORY: MAINTAIN ATMOSPHERIC LEVELS BELOW EXPOSURE LIMITS. IF NOT POSSIBLE, USE AN APPROVED AIR-FILTERING RESPIRATOR WITH APPROVED FILTERS.

OTHER PROTECTION: WEAR PROTECTIVE CLOTHING IF SKIN CONTACT OR CONTAMINATION OF CLOTHING IS LIKELY.

VENTILATION: PROVIDE GENERAL OR LOCAL EXHAUST VENTILATION TO KEEP AIRBORNE PARTICLES BELOW RECOMMENDED LEVELS.

PERSONAL HYGIENE: ALWAYS WASH HANDS AND FACE BEFORE EATING, DRINKING OR SMOKING.

SECTION IX. ----- SPECIAL PRECAUTIONS -----

* STORE IN WELL-VENTILATED, COOL AND DRY AREA AWAY FROM OXIDANTS, ALKALIS AND HIGH HEAT.

* CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES, ALL HAZARD PRECAUTIONS GIVEN IN THIS MSDS MUST BE OBSERVED.

SECTION X. ----- TRANSPORTATION -----

CLASSIFIED BY THE IMDG CODE AND THE USDOT UNDER THIOUREA DIOXIDE, CLASS 4.2, UN3341, III.

DISCLAIMER

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