MATERIAL SAFETY DATA SHEET



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| SECTION 1 CHEMICAL IDENTIFICATION | |
|-----------------------------------|------------------------|
| CATALOG#: | IB05085 |
| NAME: | GUANIDINE HCL SOLUTION |
| CAS#: | 50-01-1 |

SECTION 2. ----- HAZARDS IDENTIFICATION ------

LABEL PRECAUTIONARY STATEMENTS TOXIC (USA) HARMFUL (EU) HARMFUL BY INHALATION. IN CONTACT WITH SKIN AND IF SWALLOWED. CAUSES SEVERE IRRITATION. TARGET ORGAN(S): BONE MARROW **NERVES** IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR SUITABLE PROTECTIVE CLOTHING. HMIS: NFPA: H: 3 H: N/A F: 0 F: N/A R: 0 R: N/A

 $\begin{array}{ccc} \mathbf{R}, & \mathbf{0} & \mathbf{K}, & \mathbf{N}/\mathbf{A} \\ \mathbf{PE}; \mathbf{I} & \mathbf{SH}; \mathbf{N}/\mathbf{A} \end{array}$

SECTION 3. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

MF: CH₅N₃

EC NO: 200-002-3

SYNONYMS

AMINOFORMAMIDINE HYDROCHLORIDE * AMINOMETHANAMIDINE HYDROCHLORIDE * CARBAMIDINE HYDROCHLORIDE * GUANIDINE CHLORIDE * GUANIDINE HYDROCHLORIDE * GUANIDINIUM CHLORIDE * GUANIDINIUM HYDROCHLORIDE * IMINOUREA HYDROCHLORIDE * USAF EK-749 *

SECTION 4. ------ FIRST-AID MEASURES------

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN. WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

EXTINGUISHING MEDIA WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM. SPECIAL FIREFIGHTING PROCEDURES WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. UNUSUAL FIRE AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES------

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES. SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. HANDLING AND STORAGE------

AVOID INHALATION. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. WASH THOROUGHLY AFTER HANDLING. TOXIC. SEVERE IRRITANT. KEEP TIGHTLY CLOSED. STORE IN A COOL DRY PLACE. STORE AT ROOM TEMPERAUTRE.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING. CHEMICAL FUME HOOD RECOMMENDED. SAFETY SHOWER AND EYE BATH. FACESHIELD (8-INCH MINIMUM).

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES ------

APPEARANCE AND ODOR WHITE CRYSTALLINE POWDER PHYSICAL PROPERTIES MELTING POINT: 185°C TO 189°C

SECTION 10. ------STABILITY AND REACTIVITY ------

INCOMPATIBILITIES STRONG OXIDIZING AGENTS PROTECT FROM MOISTURE. HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS TOXIC FUMES OF: CARBON MONOXIDE, CARBON DIOXIDE NITROGEN OXIDES HYDROGEN CHLORIDE GAS

SECTION 11. ----- TOXICOLOGICAL INFORMATION ------

ACUTE EFFECTS HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. CAUSES SEVERE IRRITATION. HIGH CONCENTRATIONS ARE EXTREMELY DESTRUCTIVE TO TISSUES OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN. SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING. MAY CAUSE NERVOUS SYSTEM DISTURBANCES. TARGET ORGAN(S): BONE MARROW **NERVES** RTECS #: MF4300000 GUANIDINE, MONOHYDROCHLORIDE **IRRITATION DATA** SKN-RBT 500 MG/24H SEV NTIS** AD-A166-306 NTIS** AD-A184-068 EYE-RBT 81400 UG MOD TOXICITY DATA ORL-RAT LD50:475 MG/KG NTIS** AD-A165-747 ORL-MUS LD50:571 MG/KG ATDAEI 12,598,1993 IPR-MUS LD50:500 MG/KG NTIS** AD277-689 TARGET ORGAN DATA BEHAVIORAL (ALTERED SLEEP TIME) BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD) **BEHAVIORAL (EXCITEMENT)** BEHAVIORAL (MUSCLE CONTRACTION OR SPASTICITY) **BEHAVIORAL (IRRITABILITY)** LUNGS, THORAX OR RESPIRATION (DYSPNAE) GASTROINTESTINAL (HYPERMOTILITY, DIARRHEA) ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION ------DATA NOT YET AVAILABLE.

SECTION 13.---- DISPOSAL CONSIDERATIONS-----DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ------ TRANSPORT INFORMATION -----

NOT REGULATED.

SECTION 15. ----- REGULATORY INFORMATION ------

EUROPEAN INFORMATION EC INDEX NO: 607-148-00-0 TOXIC R 23/24/25 HARMFUL IF SWALLOWED.



 $Toxic(\mathbf{T})$

R 36/38 IRRITATING TO EYES AND SKIN.



Irritant (Xi) S 22 DO NOT BREATHE DUST. REVIEWS, STANDARDS, AND REGULATIONS OEL=MAK NOES 1983: HZD X3755; NIS 2; TNF 115; NOS 22; TNE 2097; TFE 589 EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

SECTION 16. OTHER INFORMATION------

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