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M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - CHEMICAL IDENTIFICATION- - - - -

NAME: L-CYSTEINE HCL MONOHYDRATE STANDARD MATERIAL

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 7048-04-6

MOLECULAR FORMULA: C₃H₇NO₂S*HCL*H₂O

EC NO.: 615-117-8

SYNONYMS

(R)-2-AMINO-3-MERCAPROPIONIC ACID MONOHYDROCHLORIDE MONOHYDRATE * CYSTEINE
CHLORHYDRATE MONOHYDRATE * CYSTEINE HYDROCHLORIDE * L-CYSTEINE HYDROCHLORIDE
MONOHYDRATE * L-(+)-CYSTEINE HYDROCHLORIDE MONOHYDRATE * (R)-CYSTEINE HYDROCHLORIDE
MONOHYDRATE * L-CYSTEIN HYDROCHLORIDE MONOHYDRATE * L-CYSTEINE MONOHYDROCHLORIDE
MONOHYDRATE *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

NON-HAZARDOUS

LABEL PRECAUTIONARY STATEMENTS

IRRITANT

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN

NON SELF-IGNITE

STRONG OXIDIZING AGENTS

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

IF SWALLOWED, WASH OUT MOUTH WITH WATER

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION.

IF BREATHING IS DIFFICULT, GIVE OXYGEN.

IN CASE OF CONTACT WITH EYES, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER

IN CASE OF CONTACT WITH SKIN, IMMEDIATELY WASH SKIN WITH SOAP AND PLENTY
OF WATER.

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

EXTINGUISHING MEDIA

WATER SPRAY

CARBON DIOXIDE, DRY CHEMICAL POWDER.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING EQUIPMENT 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 - - - - -

IN CASE OF RELEASE OR SPILLED

WEAR RESPIRATOR, CHEMICAL SAFETY GOOGLES, RUBBER BOOTS AND HEAVY

RUBBER GLOVES IF POSSIBLE.
SWEEP UP IN A PLASTIC BRUSH AND PICK
PLACE IN A PLASTIC 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 - - - - -

KEEP TIGHTLY CLOSED
STORE IN A DRY PLACE
ROOM TEMPERATURE
AVOID KEEP TOGETHER OTHER STRONG OXIDIZING AGENTS

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

DO NOT BREATHE DUST AND SWALLOWED
AVOID CONTACT WITH EYES, SKIN
WASH THOROUGHLY AFTER HANDLING
MECHANICAL EXHAUST REQUIRED
AVOID PROLONGED OR REPEATED EXPOSURE
DUSTPROOF RESPIRATOR
COMPATIBLE CHEMICAL-RESISTANT GLOVES
CHEMICAL SAFETY GOGGLES
SAFETY SHOWER AND EYE BATH

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

APPEARANCE
WHITE CRYSTALS OR POWDER
ODOUR
STRONGLY ACID TASTE AND IRRITANT ODOUR.
SOLUBILITY
WATER SOLUBILITY: 1100g/L AT 20°C
MELTING POINT: 185°C
pH: 1.5 TO 2.0

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

STABILITY
STABLE.
IMCOMPATIBILITIES
PROTECT FROM MOISTURE.
MAY DISCOLOR ON EXPOSURE TO AIR AND LIGHT.
STRONG OXIDIZING AGENTS
AVOID CONTACT WITH METALS.
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
CARBON MONOXIDE,
CARBON DIOXIDE,
NITROGEN OXIDES,
SULFUR OXIDES
HYDROGEN CHLORIDE GAS
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

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

ACUTE EFFECTS

CAUSES SKIN IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN
CAUSES EYE IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
MAY BE HARMFUL IF INHALED.
MAY BE HARMFUL IF SWALLOWED.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

TOXICITY DATA

IPR-MUS LD50:1250 mg/kg	NTIS** AD691-490
IVN-MUS LD50:1480 mg/kg	JJANAX 38,137,1985
UNR-MUS LD50:3 mg/kg	BJCAAI 6,160,1952

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

SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF
THIS MATERIAL.
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 - - - - -
NON-HAZARDOUS FOR AIR, SEA AND ROAD TRANSPORT

SECTION 15. - - - - - REGULATORY INFORMATION - - - - -
IRRITANT
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.
REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
NOES 1983: HZD X9440; NIS 2; TNF 196; NOS 6; TNE 1414; TFE 879

SECTION 16. - - - - - OTHER INFORMATION - - - - -
THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. WUHAN UNIVERSITY HOYO
CO, . LTD. SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING
OR FROM CONTACT WITH THE ABOVE PRODUCT.

- - - - - END - - - - -