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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- - - - -

CATALOG #: 39172  
NAME: ACETYLCHOLINE CHLORIDE, 99%  
(BIOSYNTH)

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

CAS #: 60-31-1  
MF: C7H16CLNO2  
EC NO: 200-468-8

SYNONYMS

ACECHOLIN \* ACECOLINE \* 2-ACETOXYETHYLTRIMETHYLAMMONIUM CHLORIDE \*  
ACETYLCHOLINE CHLORIDE \* O-ACETYLCHOLINE CHLORIDE \* ACETYLCHOLINE  
HYDROCHLORIDE \* ACETYLCHOLINIUM CHLORIDE \* 2-(ACETYLOXY)-N,N,N-  
TRIMETHYLETHANAMINIUM CHLORIDE \* ACH CHLORIDE \* AMMONIUM, (2-) Tj ET BT /PjCourier 10  
  
CHLORIDE ACETATE \* ETHANAMINIUM, 2-(ACETYLOXY)-N,N,N-TRIMETHYL-,  
CHLORIDE \* (2-HYDROXYETHYL)TRIMETHYLAMMONIUM CHLORIDE ACETATE \*  
MIOCHOL \* OVISOT \* TL 1505 \*

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

LABEL PRECAUTIONARY STATEMENTS

IRRITANT  
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.  
LACHRYMATOR.  
TARGET ORGAN(S):  
VASCULAR SYSTEM  
HEART  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.  
WEAR SUITABLE PROTECTIVE CLOTHING.

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.  
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.  
CALL A PHYSICIAN.  
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL  
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

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

EXTINGUISHING MEDIA

CARBON DIOXIDE.  
DRY CHEMICAL POWDER.  
WATER SPRAY.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO  
PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - HANDLING AND STORAGE- - - - -  
REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -  
WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT  
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.  
SAFETY SHOWER AND EYE BATH.  
USE ONLY IN A CHEMICAL FUME HOOD.  
DO NOT BREATHE DUST.  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
AVOID PROLONGED OR REPEATED EXPOSURE.  
WASH THOROUGHLY AFTER HANDLING.  
WASH CONTAMINATED CLOTHING BEFORE REUSE.  
LACHRYMATOR.  
IRRITANT.  
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -  
PHYSICAL PROPERTIES  
MELTING POINT: 148 C

SECTION 10. - - - - - -STABILITY AND REACTIVITY - - - - -  
CONDITIONS TO AVOID  
PROTECT FROM MOISTURE.  
INCOMPATIBILITIES  
PROTECT FROM MOISTURE.  
STRONG OXIDIZING AGENTS  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
CARBON MONOXIDE, CARBON DIOXIDE  
NITROGEN OXIDES  
HYDROGEN CHLORIDE GAS

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -  
ACUTE EFFECTS  
CAUSES SKIN IRRITATION.  
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.  
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER  
RESPIRATORY TRACT.  
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,  
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND  
VOMITING.

CHRONIC EFFECTS  
TARGET ORGAN(S):  
VASCULAR SYSTEM  
HEART  
CENTRAL NERVOUS SYSTEM  
SMOOTH MUSCLE  
SKELETAL MUSCLE  
ADRENAL MEDULLA

RTECS #: FZ9800000  
CHOLINE ACETATE (ESTER), CHLORIDE

TOXICITY DATA

ORL-RAT LD50:2500 MG/KG	JPETAB 58,337,1936
SCU-RAT LD50:250 MG/KG	JPETAB 58,337,1936
IVN-RAT LD50:22 MG/KG	JPETAB 58,337,1936
ORL-MUS LD50:3 GM/KG	JPETAB 58,337,1936
IPR-MUS LD50:15300 UG/KG	FATOAO 20(4),32,1957
SCU-MUS LD50:170 MG/KG	JPETAB 58,337,1936
IVN-MUS LD50:10 MG/KG	JPETAB 119,541,1957
IVN-GPG LD50:7700 UG/KG	AIPTAK 170,461,1967

TARGET ORGAN DATA

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 - - - - -  
CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

IRRITANT

R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.

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WEAR SUITABLE PROTECTIVE CLOTHING.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK