

Valid 11/2002 - 01/2003

Sigma Chemical Co.  
P.O. Box 14508  
St. Louis, MO 63178 USA  
Phone: 314-771-5765

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 #: L6146  
NAME: LUGOL SOLUTION

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

CAS #:NONE

HAZARDOUS INGREDIENTS

CONTAINS IODINE, CHEMICAL ABSTRACTS REGISTRY NUMBER 7553-56-2.  
CONTAINS POTASSIUM IODIDE, CHEMICAL ABSTRACTS SERVICE REGISTRY  
NUMBER, 7681-11-0.

SYNONYMS

IODINE-POTASSIUM IODIDE \* LUGOL'S IODINE \* LUGOL'S SOLUTION \*  
MICROIODIDE \*

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

LABEL PRECAUTIONARY STATEMENTS

HIGHLY TOXIC (USA)  
TOXIC (EU)  
MAY CAUSE HARM TO THE UNBORN CHILD.  
TOXIC IN CONTACT WITH SKIN AND IF SWALLOWED.  
CAUSES BURNS.  
MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.  
SEVERE LACHRYMATOR.  
TARGET ORGAN(S):  
THYROID  
BLOOD

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE  
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).  
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE  
PROTECTION.

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

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

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.  
CALL A PHYSICIAN IMMEDIATELY.

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

IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER  
FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND  
SHOES. CALL A PHYSICIAN.

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER  
FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING  
THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

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- - - - -

RUBBER GLOVES.

COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.

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

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

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -  
SAFETY SHOWER AND EYE BATH.  
MECHANICAL EXHAUST REQUIRED.  
WASH CONTAMINATED CLOTHING BEFORE REUSE.  
WASH THOROUGHLY AFTER HANDLING.  
DO NOT BREATHE VAPOR.  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
AVOID PROLONGED OR REPEATED EXPOSURE.  
NIOSH/MSHA-APPROVED RESPIRATOR.  
COMPATIBLE CHEMICAL-RESISTANT GLOVES.  
CHEMICAL SAFETY GOGGLES.  
KEEP TIGHTLY CLOSED.  
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -  
APPEARANCE AND ODOR  
LIQUID.

SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -  
STABILITY  
STABLE.  
INCOMPATIBILITIES  
STRONG OXIDIZING AGENTS  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
POTASSIUM OXIDES  
HYDROGEN IODIDE  
HAZARDOUS POLYMERIZATION  
WILL NOT OCCUR.

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -  
ACUTE EFFECTS

CAUSES BURNS.  
TOXIC IF ABSORBED THROUGH SKIN.  
MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.  
MAY BE HARMFUL IF INHALED.  
TOXIC IF SWALLOWED.  
INGESTION CAN CAUSE IMMEDIATE BURNING PAIN IN THE MOUTH, THROAT, ABDOMEN; SEVERE SWELLING OF THE LARYNX AND SKELETAL PARALYSIS AFFECTING THE ABILITY TO BREATHE, CIRCULATORY SHOCK AND CONVULSIONS. MAY CAUSE ALLERGIC REACTION.  
PROLONGED EXPOSURE TO IODIDES MAY PRODUCE IODISM IN SENSITIVE INDIVIDUALS. SYMPTOMS OF EXPOSURE INCLUDE: SKIN RASH, RUNNING NOSE, HEADACHE AND IRRITATION OF THE MUCOUS MEMBRANES. FOR SEVERE CASES THE SKIN MAY SHOW PIMPLES, BOILS, HIVES, BLISTERS AND BLACK AND BLUE SPOTS. IODIDES ARE READILY DIFFUSED ACROSS THE PLACENTA. NEONATAL DEATHS FROM RESPIRATORY DISTRESS SECONDARY TO GOITER HAVE BEEN REPORTED. IODIDES HAVE BEEN KNOWN TO CAUSE DRUG-INDUCED FEVERS, WHICH ARE USUALLY OF SHORT DURATION.

CHRONIC EFFECTS

TARGET ORGAN(S):  
THYROID  
BLOOD  
BONE MARROW  
MAY CAUSE CONGENITAL MALFORMATION IN THE FETUS.

RTECS #: TT6840000  
POTASSIUM TRIIODIDE

TARGET ORGAN DATA

EFFECTS ON FERTILITY (OTHER MEASURES OF FERTILITY)  
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

CAUTION: SUBSTANCE NOT YET FULLY TESTED.

TOXIC

R 61

MAY CAUSE HARM TO THE UNBORN CHILD.

R 24/25

TOXIC IN CONTACT WITH SKIN AND IF SWALLOWED.

R 42/43

MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.

R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE  
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

S 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE  
PROTECTION.

S 26

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

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

NOES 1983: HZD X3144; NIS 2; TNF 573; NOS 11; TNE 6430; TFE 3118

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

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. SIGMA, ALDRICH,  
FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING  
OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR  
PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.  
COPYRIGHT 2001 SIGMA-ALDRICH CO.  
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY