

Product Number: **204625**

Product Name: **Thallium(I) sulfate, 99.995%**

[Description / Pricing](#)

[Cert. of Analysis](#)

[MSDS](#)

[Print Preview](#)

[Bulk Quote](#)

[Ask A Scientist](#)

Valid 11/2000 - 01/2001

Sigma-Aldrich Canada Ltd.
2149 Winston Park Drive
Oakville, Ontario L6H 6J8
Tel: (905) 829-9500

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 #: 204625
NAME: THALLIUM(I) SULFATE, 99.995%

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -
CAS #: 7446-18-6
MF: O4STL2
EC NO: 231-201-3

SYNONYMS
C.F.S. * CSF-GIFTWEIZEN * DITHALLIUM SULFATE * DITHALLIUM(1+) SULFATE
* ECCOTHAL * M7-GIFTKOERNER * RATTENGIFTKONSERVE * RCRA WASTE NUMBER
P115 * SULFURIC ACID, DITHALLIUM(1+) SALT (8CI,9CI) * SULFURIC ACID,
THALLIUM(1+) SALT (1:2) * THALLIUM SULFATE * THALLIUM(1) SULFATE *
THALLOUS SULFATE * THARATTIN * ZELIO *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -
LABEL PRECAUTIONARY STATEMENTS
HIGHLY TOXIC (USA)
VERY TOXIC (EU)
VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
DANGER OF CUMULATIVE EFFECTS.
POSSIBLE RISK OF IRREVERSIBLE EFFECTS.
POSSIBLE TERATOGEN.
TARGET ORGAN(S):
NERVES
CARDIOVASCULAR SYSTEM
SKIN
EYES
LIVER
KIDNEYS
READILY ABSORBED THROUGH SKIN.
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.
DO NOT BREATHE DUST.

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 INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
FOR THALLIUM ANTIDOTE, SEE EUR. J. PHARMACOL., 6, 340 (1969).

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -
EXTINGUISHING MEDIA
NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
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 - - - - -
EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
WEAR DISPOSABLE COVERALLS AND DISCARD THEM AFTER USE.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.

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

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - -
WASH CONTAMINATED CLOTHING BEFORE REUSE.
WASH THOROUGHLY AFTER HANDLING.
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.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR

WHITE CRYSTALLINE POWDER

PHYSICAL PROPERTIES

MELTING POINT: 632 C

SPECIFIC GRAVITY: 6.770

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

INCOMPATIBILITIES

STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

THALLIUM

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

ACUTE EFFECTS

THE MOST CHARACTERISTIC SYMPTOM OF THALLIUM EXPOSURE IS ALOPECIA (LOSS OF HAIR). CUTANEOUS EFFECTS MAY INCLUDE DRY, SCALY SKIN AND IMPAIRMENT OF NAIL GROWTH OFTEN RESULTING IN THE APPEARANCE OF CRESCENT-SHAPED STRIPS ACROSS FINGERNAILS AND TOENAILS (MEES' LINE). OTHER SYMPTOMS IN ACUTE POISONING RELATE CHIEFLY TO THE GASTROINTESTINAL TRACT, NERVOUS SYSTEM, SKIN, EYES, AND CARDIOVASCULAR SYSTEM. ACUTE POISONING RESULTS IN SWELLING OF THE FEET AND LEGS, ARTHRALGIA, VOMITING, INSOMNIA, HYPER-ESTHESIA AND PARESTHESIA OF THE HANDS AND FEET, MENTAL CONFUSION, POLYNEURITIS WITH SEVERE PAIN IN THE LEGS AND LOINS, PARTIAL PARALYSIS OF THE LEGS, ANGINA-LIKE PAINS, NEPHRITIS, WASTING AND WEAKNESS, AND LYMPHOCYTOSIS AND EOSINOPHILIA. IN CHRONIC POISONING, CENTRAL AND PERIPHERAL NERVOUS SYSTEM ABNORMALITIES MAY PERSIST INCLUDING ATAXIA, TREMOR, INCOORDINATION, PARALYSIS OF EXTREMITIES, ENDOCRINE DISORDERS, MEMORY LOSS AND PSYCHOSES MAY DEVELOP.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

MAY CAUSE SKIN IRRITATION.

MAY CAUSE EYE IRRITATION.

CAN CAUSE BLINDNESS.

MATERIAL MAY BE IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.

CHRONIC EFFECTS

OVEREXPOSURE MAY CAUSE REPRODUCTIVE DISORDER(S) BASED ON TESTS WITH LABORATORY ANIMALS.

TARGET ORGAN(S):

NERVES

CARDIOVASCULAR SYSTEM

EYES

SKIN

LIVER

KIDNEYS

MALE REPRODUCTIVE SYSTEM

RTCS #: XG6800000

THALLIUM(I) SULFATE (2:1)

TOXICITY DATA

ORL-MAN LDLO:3 MG/KG	85ECAN 2,101,1978
ORL-MAN LDLO:14 MG/KG	JTSCDR 3,325,1978
ORL-HMN LDLO:2166 UG/KG	YKYUA6 28,329,1977
ORL-RAT LD50:16 MG/KG	YAKUD5 22,291,1980
SKN-RAT LD50:550 MG/KG	NNGADV 18,8209,1993
UNR-RAT LD50:15 MG/KG	YKYUA6 30,397,1979
ORL-MUS LD50:23500 UG/KG	GISAAA 29(2),23,1964
SCU-MUS LD50:26600 UG/KG	MEPAAX 30,257,1979
UNR-RBT LD50:25 MG/KG	85JFAN A390,1983

TARGET ORGAN DATA

PERIPHERAL NERVE AND SENSATION (PARESTHESIA)

PERIPHERAL NERVE AND SENSATION (STRUCTURAL CHANGE IN NERVE OR SHEATH)

SENSE ORGANS AND SPECIAL SENSES (OTHER EYE EFFECTS)

BEHAVIORAL (SOMNOLENCE)

BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)

BEHAVIORAL (ATAXIA)

BEHAVIORAL (IRRITABILITY)

CARDIAC (CHANGE IN RATE)

LUNGS, THORAX OR RESPIRATION (DYSPNAE)

KIDNEY, URETER, BLADDER (OTHER CHANGES IN URINE COMPOSITION)

SKIN AND APPENDAGES (AFTER SYSTEMIC EXPOSURE: DERMATITIS, OTHER)

SKIN AND APPENDAGES (HAIR)

PATERNAL EFFECTS (SPERMATOGENESIS)

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 - - - - -
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.
SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -

CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.
SECTION 15. - - - - - REGULATORY INFORMATION - - - - -

EUROPEAN INFORMATION

EC INDEX NO: 081-003-00-9

VERY TOXIC

R 28

VERY TOXIC IF SWALLOWED.

R 38

IRRITATING TO SKIN.

R 48/25

TOXIC: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE IF SWALLOWED.

S 13

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

S 36/37

WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.

S 45

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

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-TWA 0.1 MG(TL)/M3 (SKIN) DTLVS* TLV/BEI,1999

OSHA PEL (GEN INDU):8H TWA 0.1 MG(TL)/M3 (SKIN)

CFRGBR 29,1910.1000,1994

OSHA PEL (CONSTRUC):8H TWA 0.1 MG(TL)/M3 (SKIN)

CFRGBR 29,1926.55,1994

OSHA PEL (SHIPYARD):8H TWA 0.1 MG(TL)/M3 (SKIN)

CFRGBR 29,1915.1000,1993

OSHA PEL (FED CONT):8H TWA 0.1 MG(TL)/M3 (SKIN)

CFRGBR 41,50-204.50,1994

OEL-AUSTRALIA: TWA 0.1 MG(TL)/M3, SKIN, JAN1993

OEL-AUSTRIA: MAK 0.1 MG(TL)/M3, JAN1999

OEL-BELGIUM: TWA 0.1 MG(TL)/M3, SKIN, JAN1993

OEL-DENMARK: TWA 0.1 MG(TL)/M3, SKIN, JAN1999

OEL-FINLAND: TWA 0.1 MG(TL)/M3, SKIN, JAN1999

OEL-GERMANY: MAK 0.1 MG(TL)/M3, JAN1999

OEL-THE NETHERLANDS: MAC-TGG 0.1 MG(TL)/M3, SKIN, JAN1999

OEL-THE PHILIPPINES: TWA 0.1 MG(TL)/M3, SKIN, JAN1993

OEL-POLAND: MAC(TWA) 0.1 MG(TL)/M3, MAC(STEL) 0.3 MG(TL)/M3, JAN1999

OEL-SWITZERLAND: MAK-W 0.1 MG(TL)/M3, SKIN, JAN1999

OEL-THAILAND: TWA 0.1 MG(TL)/M3, JAN1993

OEL-TURKEY: TWA 0.1 MG(TL)/M3, SKIN, JAN1993

OEL IN ARGENTINA, BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV;

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

ON EPA IRIS DATABASE

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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 1999 SIGMA-ALDRICH CO.

LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY