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SA F E T Y D A T A S H E E T

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	30103
NAME:	Chloramine T trihydrate
SYNONYMS:	N-Chloro- <i>p</i> -toluenesulfonamide sodium salt
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

ACUTE TOXICITY, ORAL (CATEGORY 4), H302

SKIN CORROSION (CATEGORY 1B), H314

SERIOUS EYE DAMAGE (CATEGORY 1), H318

RESPIRATORY SENSITISATION (CATEGORY 1), H334

SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 2), H401

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM**



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H302 HARMFUL IF SWALLOWED.
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H334 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
H401 TOXIC TO AQUATIC LIFE.

PRECAUTIONARY STATEMENT(S)

P260 DO NOT BREATHE DUST OR MIST.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P273 AVOID RELEASE TO THE ENVIRONMENT.
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P285 IN CASE OF INADEQUATE VENTILATION WEAR RESPIRATORY PROTECTION.
P301 + P312 + P330 IF SWALLOWED: CALL A POISON CENTER/ DOCTOR IF YOU FEEL UNWELL. RINSE MOUTH.
P301 + P330 + P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.
P303 + P361 + P353 IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.
P304 + P340 + P310 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER/ DOCTOR.
P305 + P351 + P338 + P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER/ DOCTOR.
P342 + P311 IF EXPERIENCING RESPIRATORY SYMPTOMS: CALL A POISON CENTER/ DOCTOR.
P363 WASH CONTAMINATED CLOTHING BEFORE REUSE.
P405 STORE LOCKED UP.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

CONTACT WITH ACIDS LIBERATES TOXIC GAS.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_7H_7ClNNaO_2S \cdot 3H_2O$
MW: 281.70
CAS-NO. 7080-50-4
PURITY: 98.0-103.0% (Titration)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Chloramine T trihydrate		
	ACUTE TOX. 4; SKIN CORR. 1B; EYE DAM. 1; RESP. SENS. 1; AQUATIC ACUTE 2; H302, H314, H318, H334, H401	<= 100 %

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE FIRST AIDER NEEDS TO PROTECT HIMSELF. SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

IF INHALED AFTER INHALATION: FRESH AIR. CALL IN PHYSICIAN.

IN CASE OF SKIN CONTACT IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER. CALL A PHYSICIAN IMMEDIATELY.

IN CASE OF EYE CONTACT AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. IMMEDIATELY CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.

IF SWALLOWED AFTER SWALLOWING: MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST), AVOID VOMITING (RISK OF PERFORATION). CALL A PHYSICIAN IMMEDIATELY. DO NOT ATTEMPT TO NEUTRALISE.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA
USE EXTINGUISHING MEASURES THAT ARE APPROPRIATE TO LOCAL CIRCUMSTANCES AND THE SURROUNDING ENVIRONMENT.

UNSUITABLE EXTINGUISHING MEDIA
FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF EXTINGUISHING AGENTS ARE GIVEN.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

CARBON OXIDES, NITROGEN OXIDES (NOX), SULFUR OXIDES, HYDROGEN CHLORIDE GAS, SODIUM OXIDES NOT COMBUSTIBLE.
VAPORS ARE HEAVIER THAN AIR AND MAY SPREAD ALONG FLOORS.
FORMS EXPLOSIVE MIXTURES WITH AIR ON INTENSE HEATING.
AMBIENT FIRE MAY LIBERATE HAZARDOUS VAPOURS.

ADVICE FOR FIREFIGHTERS

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED BREATHING APPARATUS. PREVENT SKIN CONTACT BY KEEPING A SAFE DISTANCE OR BY WEARING SUITABLE PROTECTIVE CLOTHING.

FURTHER INFORMATION

SUPPRESS (KNOCK DOWN) GASES/VAPORS/MISTS WITH A WATER SPRAY JET. PREVENT FIRE EXTINGUISHING WATER FROM CONTAMINATING SURFACE WATER OR THE GROUND WATER SYSTEM.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

ADVICE FOR NON-EMERGENCY PERSONNEL: AVOID GENERATION AND INHALATION OF DUSTS IN ALL CIRCUMSTANCES. AVOID SUBSTANCE CONTACT. ENSURE ADEQUATE VENTILATION. EVACUATE THE DANGER AREA, OBSERVE EMERGENCY PROCEDURES, CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL
PRECAUTIONS**

DO NOT LET PRODUCT ENTER DRAINS.

**METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UP**

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS.
OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE
SECTIONS 7 AND 10). TAKE UP CAREFULLY. DISPOSE OF
PROPERLY. CLEAN UP AFFECTED AREA. AVOID
GENERATION OF DUSTS

**REFERENCE TO OTHER
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

WORK UNDER HOOD. DO NOT INHALE
SUBSTANCE/MIXTURE.
FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIES**

TIGHTLY CLOSED. DRY. KEEP LOCKED UP OR IN AN AREA
ACCESSIBLE ONLY TO QUALIFIED OR AUTHORIZED
PERSONS.
DO NOT STORE NEAR ACIDS.
STORE UNDER INERT GAS. AIR SENSITIVE.

Store at RT

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2 NO
OTHER SPECIFIC USES ARE STIPULATED.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS

**APPROPRIATE
ENGINEERING CONTROLS**

IMMEDIATELY CHANGE CONTAMINATED CLOTHING. APPLY
PREVENTIVE SKIN PROTECTION. WASH HANDS AND FACE
AFTER WORKING WITH SUBSTANCE.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION	USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). SAFETY GLASSES
SKIN PROTECTION	HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.
BODY PROTECTION	PROTECTIVE CLOTHING
RESPIRATORY PROTECTION	REQUIRED WHEN DUSTS ARE GENERATED. OUR RECOMMENDATIONS ON FILTERING RESPIRATORY PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER ACCOMPANYING STANDARDS RELATING TO THE USED RESPIRATORY PROTECTION SYSTEM.
CONTROL OF ENVIRONMENTAL EXPOSURE	DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White crystalline powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	8.0 - 10.0 AT 50 G/L AT 20 C
MELTING POINT/FREEZING POINT	
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPOURATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	SOLUBLE

PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

OTHER SAFETY INFORMATION

NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	FORMS EXPLOSIVE MIXTURES WITH AIR ON INTENSE HEATING. A RANGE FROM APPROX. 15 KELVIN BELOW THE FLASH POINT IS TO BE RATED AS CRITICAL. CONTACT WITH ACIDS LIBERATES TOXIC GAS.
CHEMICAL STABILITY	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS
POSSIBILITY OF HAZARDOUS REACTIONS	GENERATES DANGEROUS GASES OR FUMES IN CONTACT WITH: ACIDS
CONDITIONS TO AVOID	STRONG HEATING.
INCOMPATIBLE MATERIALS	DO NOT STORE NEAR ACIDS. STRONG OXIDIZING AGENTS, AMMONIA
HAZARDOUS DECOMPOSITION PRODUCTS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, NITROGEN OXIDES (NOX), SULFUR OXIDES, HYDROGEN CHLORIDE GAS, SODIUM OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

LD50 ORAL - RAT - MALE AND FEMALE - 935 MG/KG
(OECD TEST GUIDELINE 401)
REMARKS: (ANHYDROUS SUBSTANCE)

LC50 INHALATION - RAT - MALE AND FEMALE - 4 H - >
0.275 MG/L
(OECD TEST GUIDELINE 403)
REMARKS: (ANHYDROUS SUBSTANCE)

INHALATION: CORROSIVE TO RESPIRATORY SYSTEM.

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN
CORROSION/IRRITATION**

SKIN - RABBIT
RESULT: CAUSES BURNS. - 4 H
(OECD TEST GUIDELINE 404)
REMARKS: (ANHYDROUS SUBSTANCE)

**SERIOUS EYE
DAMAGE/EYE IRRITATION**

EYES - RABBIT
RESULT: CAUSES SERIOUS EYE DAMAGE. - 72 H
(OECD TEST GUIDELINE 405)
REMARKS: (ANHYDROUS SUBSTANCE)
CAUSES SERIOUS EYE DAMAGE.

**RESPIRATORY OR SKIN
SENSITISATION**

MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR
BREATHING DIFFICULTIES IF INHALED. (ECHA)
(ANHYDROUS SUBSTANCE)

**GERM CELL
MUTAGENICITY**

AMES TEST
ESCHERICHIA COLI/SALMONELLA TYPHIMURIUM
RESULT: NEGATIVE
(ANHYDROUS SUBSTANCE)
IN VITRO MAMMALIAN CELL GENE MUTATION TEST
MOUSE LYMPHOMA CELLS
RESULT: NEGATIVE
(ANHYDROUS SUBSTANCE)
OECD TEST GUIDELINE 474
MOUSE - MALE AND FEMALE - RED BLOOD CELLS
(ERYTHROCYTES)
RESULT: NEGATIVE
(ANHYDROUS SUBSTANCE)

CARCINOGENICITY

IARC:

NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS
GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS
PROBABLE, POSSIBLE OR CONFIRMED HUMAN
CARCINOGEN BY IARC.

NTP:

NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS
GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A
KNOWN OR ANTICIPATED CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE ACUTE ORAL TOXICITY - IF INGESTED, SEVERE BURNS OF THE MOUTH AND THROAT, AS WELL AS A DANGER OF PERFORATION OF THE ESOPHAGUS AND THE STOMACH. ACUTE INHALATION TOXICITY - MUCOSAL IRRITATIONS, COUGH, SHORTNESS OF BREATH, POSSIBLE DAMAGES: DAMAGE OF RESPIRATORY TRACT

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL INFORMATION REPEATED DOSE TOXICITY - RAT - MALE - ORAL - 90 DAYS - NOAEL (NO OBSERVED ADVERSE EFFECT LEVEL) - 214 MG/KG - LOAEL (LOWEST OBSERVED ADVERSE EFFECT LEVEL) - 738 MG/KG (ANHYDROUS SUBSTANCE)

RTECS: NOT AVAILABLE

ABSORPTION INTO THE BODY LEADS TO THE FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATION CAUSES CYANOSIS. ONSET MAY BE DELAYED 2 TO 4 HOURS OR LONGER, COUGH, SHORTNESS OF BREATH, HEADACHE, NAUSEA, VOMITING, REPEATED EXPOSURE MAY CAUSE ASTHMA. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

AFTER ABSORPTION:
WE HAVE NO DESCRIPTION OF ANY TOXIC SYMPTOMS.
HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.

STOMACH - IRREGULARITIES - BASED ON HUMAN EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

TOXICITY TO FISH	STATIC TEST LC50 - ONCORHYNCHUS MYKISS (RAINBOW TROUT) - 100 MG/L - 96 H (US-EPA) REMARKS: (ANHYDROUS SUBSTANCE)
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	EC50 - DAPHNIA MAGNA (WATER FLEA) - 4.5 MG/L - 48 H REMARKS: (IUCLID)
TOXICITY TO ALGAE	NOEC - DAPHNIA MAGNA (WATER FLEA) - 1.1 MG/L - 21 D (OECD TEST GUIDELINE 202) STATIC TEST ERC50 - PSEUDOKIRCHNERIELLA SUBCAPITATA (GREEN ALGAE) - 13 MG/L - 96 H (OECD TEST GUIDELINE 201) REMARKS: (ANHYDROUS SUBSTANCE)
TOXICITY TO BACTERIA	STATIC TEST EC50 - ACTIVATED SLUDGE - 37 MG/L - 3 H (OECD TEST GUIDELINE 209) REMARKS: (ANHYDROUS SUBSTANCE)
PERSISTENCE AND DEGRADABILITY	
BIODEGRADABILITY	AEROBIC - EXPOSURE TIME 28 D RESULT: 92 % - READILY BIODEGRADABLE. (OECD TEST GUIDELINE 301D) REMARKS: (ANHYDROUS SUBSTANCE)
BIOACCUMULATIVE POTENTIAL	
BIOACCUMULATION	ONCORHYNCHUS MYKISS (RAINBOW TROUT) - 1 H AT 11.8 C - 20 MG/L BIOCONCENTRATION FACTOR (BCF): 2.2
MOBILITY IN SOIL	NO DATA AVAILABLE
RESULTS OF PBT AND VPVB ASSESSMENT	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED.
OTHER ADVERSE EFFECTS	DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT	WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH THE NATIONAL AND LOC NO MIXING WITH OTHER WASTE.
CONTAMINATED PACKAGING	DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Chloramine T trihydrate)
UN NUMBER: 3263
CLASS: 8
PACKING GROUP: II
REPORTABLE QUANTITY (RQ):
POISON INHALATION HAZARD: NO

IMDG

PROPER SHIPPING NAME: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Chloramine T trihydrate)
UN NUMBER: 3263
CLASS: 8
PACKING GROUP: II
EMS-NO: F-A, S-B

IATA

PROPER SHIPPING NAME: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Chloramine T trihydrate)
UN NUMBER: 3263
CLASS: 8
PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

SARA 311/312 HAZARDS ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H302 HARMFUL IF SWALLOWED.
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H334 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING
DIFFICULTIES IF INHALED.
H401 TOXIC TO AQUATIC LIFE.

MSDS LEGEND

MW: MOLECULAR WEIGHT
MF: MOLECULAR FORMULA
VOC: VOLATILE ORGANIC COMPOUNDS
ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL
HYGINISTS
CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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