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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 36363

NAME: Isobutyric acid

SYNONYMS: 2-Methylpropionic acid

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)

FLAMMABLE LIQUIDS (CATEGORY 3), H226 ACUTE TOXICITY, ORAL (CATEGORY 4), H302 ACUTE TOXICITY, DERMAL (CATEGORY 3), H311 SKIN CORROSION (CATEGORY 1B), H314 SERIOUS EYE DAMAGE (CATEGORY 1), H318

SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 3), H402

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)

FLAMMABLE LIQUID AND VAPOUR. H226

HARMFUL IF SWALLOWED H302 H311 TOXIC IN CONTACT WITH SKIN.

H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE

H402 HARMFUL TO AQUATIC LIFE.

PRECAUTIONARY STATEMENT(S)

P210	KEEP AWAY FROM HEAT	, HOT SURFACES, SPARKS, OPEN

FLAMES AND OTHER IGNITION SOURCES. NO SMOKING.

P233 KEEP CONTAINER TIGHTLY CLOSED

P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.

P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/

LIGHTING/ EQUIPMENT.

USE ONLY NON-SPARKING TOOLS P242

TAKE ACTION TO PREVENT STATIC DISCHARGES. P243 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.

IF SWALLOWED: CALL A POISON CENTER/DOCTOR IF YOU P301 + P312 + P330

FEEL UNWELL. RINSE MOUTH.

P301 + P330 + P331IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING

IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL P303 + P361 + P353

CONTAMINATED CLOTHING. RINSE SKIN WITH WATER.

P304 + P340 + P310IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP

COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A

POISON CENTER/DOCTOR.

IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL P305 + P351 + P338 +

P310 MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND

EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A

POISON CENTER/DOCTOR

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE

REUSE.

P370 + P378IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR

ALCOHOL-RESISTANT FOAM TO EXTINGUISH

STORE IN A WELL-VENTILATED PLACE. KEEP COOL. P403 + P235

P405 STORE LOCKED UP.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED

WASTE DISPOSAL PLANT.

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_4H_8O_2$

MW: 88.11

CAS-NO. 79-31-2

PURITY: $\geq 99\%$ (Assay by titration)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Isobutyric acid		
	FLAM. LIQ. 3; ACUTE TOX. 4;	<= 100 %
	ACUTE TOX. 3; SKIN CORR. 1B;	
	EYE DAM. 1; AQUATIC ACUTE	
	3; H226, H302, H311, H314, H402	

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 CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA

SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF

DANGEROUS AREA.

IF INHALED IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF

NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

CONSULT A PHYSICIAN.

IN CASE OF SKIN

CONTACT

TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF

WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL.

CONSULT A PHYSICIAN.

IN CASE OF EYE

CONTACT

RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT

LEAST 15 MINUTES AND CONSULT A

PHYSICIAN.CONTINUE RINSING EYES DURING

TRANSPORT TO HOSPITAL.

IF SWALLOWED DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING

BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER, CONSULT A PHYSICIAN

Mooth with while condoll millions

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 USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

EXTINGUISHING MEDIA CHEMICAL OR CARBON DIOXIDE.

SPECIAL HAZARDS CARBON OXIDES

ARISING FROM THE

SUBSTANCE OR MIXTURE

ADVICE FOR WEAR SELF-CONTAINED BREATHING APPARATUS FOR

FIREFIGHTERS FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL WEAR RESPIRATORY PROTECTION. AVOID BREATHING

PRECAUTIONS, VAPOURS, MIST OR GAS. ENSURE ADEQUATE

PROTECTIVEVENTILATION. REMOVE ALL SOURCES OF IGNITION.EQUIPMENT ANDEVACUATE PERSONNEL TO SAFE AREAS. BEWARE OFEMERGENCYVAPOURS ACCUMULATING TO FORM EXPLOSIVE

PROCEDURES CONCENTRATIONS.

VAPOURS CAN ACCUMULATE IN LOW AREAS.

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO

PRECAUTIONS DO SO. DO NOT LET PRODUCT ENTER DRAINS.

DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

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

CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE

SECTION 13).

REFERENCE TO OTHER **SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE

HANDLING

AVOID CONTACT WITH SKIN AND EYES. AVOID

INHALATION OF VAPOUR OR MIST.

KEEP AWAY FROM SOURCES OF IGNITION - NO

SMOKING. TAKE MEASURES TO PREVENT THE BUILD

UP OF ELECTROSTATIC CHARGE. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT

UPRIGHT TO PREVENT LEAKAGE.

STENCH

Store at RT

APART FROM THE USES MENTIONED IN SECTION 1.2 NO SPECIFIC END USE(S)

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. HAZARDOUS COMPONENTS WITHOUT WORKPLACE CONTROL PARAMETERS

EXPOSURE CONTROLS

APPROPRIATE

AVOID CONTACT WITH SKIN, EYES AND CLOTHING. **ENGINEERING CONTROLS** WASH HANDS BEFORE BREAKS AND IMMEDIATELY

AFTER HANDLING THE PRODUCT.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

TIGHTLY FITTING SAFETY GOGGLES. FACESHIELD (8-INCH MINIMUM). USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

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.

FULL CONTACT

MATERIAL: NATURE LATEX

MINIMUM LAYER THICKNESS: 0.6 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:LAPREN (KCL 706, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 30 MIN

MATERIAL TESTED: DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

BODY PROTECTION

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORY WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING **PROTECTION** RESPIRATORS ARE APPROPRIATE USE A FULL-FACE

RESPIRATORS ARE APPROPRIATE USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION

(US) OR TYPE AXBEK (EN 14387) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING

CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR

CEN (EU).

CONTROL OF ENVIRONMENTAL EXPOSURE PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE

AVOIDED.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Colorless liquid ODOUR STENCH

ODOUR THRESHOLD NO DATA AVAILABLE

PH 2.3 AT 500 G/L AT 25 C (77 F)

MELTING -47 °C

POINT/FREEZING POINT

INITIAL BOILING POINT 153 - 154 °C

AND BOILING RANGE

FLASH POINT 55 °C

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER UPPER EXPLOSION LIMIT: 10 %(V) FLAMMABILITY OR LOWER EXPLOSION LIMIT: 2 %(V)

EXPLOSIVE LIMITS

VAPOUR PRESSURE 2.0 HPA AT 20 C (68 F) VAPOUR DENSITY 3.04 - (AIR = 1.0)

RELATIVE DENSITY 0.95

WATER SOLUBILITY 618 G/L AT 20 C (68 F) - OECD TEST GUIDELINE 105 -

SOLUBLE

PARTITION COEFFICIENT: LOG POW: 1.1 AT 25 C (77 F)

N- OCTANOL/WATER

AUTO-IGNITION 455 C (851 F) AT 1,018 HPA

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

VISCOSITY NO DATA AVAILABLE EXPLOSIVE PROPERTIES NO DATA AVAILABLE OXIDIZING PROPERTIES NO DATA AVAILABLE

OTHER SAFETY INFORMATION

SURFACE TENSION 70.2 MN/M AT 20 C (68 F)

RELATIVE VAPOUR

DENSITY

3.04 - (AIR = 1.0)

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE

CONDITIONS.

POSSIBILITY OF HAZARDOUS REACTIONS NO DATA AVAILABLE

CONDITIONS TO AVOID HEAT, FLAMES AND SPARKS.

INCOMPATIBLE MATERIALS

STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON 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 NO DATA AVAILABLE

INHALATION: NO DATA AVAILABLE

LD50 DERMAL - RABBIT - MALE - 474 MG/KG

(OECD TEST GUIDELINE 402)

NO DATA AVAILABLE

SKIN NO DATA AVAILABLE

CORROSION/IRRITATION

SERIOUS EYE EYES RABBIT

DAMAGE/EYE IRRITATION RESULT: CORROSIVE

RESPIRATORY OR SKIN SENSITISATION

NO DATA AVAILABLE

GERM CELL MUTAGENICITY IN VITRO MAMMALIAN CELL GENE MUTATION TEST

CHINESE HAMSTER OVARY CELLS

RESULT: NEGATIVE

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 IDENTIFIED AS A CARCINOGEN OR POTENTIAL

CARCINOGEN BY OSHA.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

TOXICITY - SINGLE

EXPOSURE

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

TOXICITY - REPEATED

EXPOSURE

NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL INFORMATION

RTECS: NQ4375000

BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, SPASM,

INFLAMMATION AND EDEMA OF THE LARYNX, SPASM,

INFLAMMATION AND EDEMA OF THE BRONCHI, PNEUMONITIS, PULMONARY EDEMA, MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN., TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN

THOROUGHLY INVESTIGATED

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY TO FISH STATIC TEST LC50 - LEUCISCUS IDUS (GOLDEN ORFE)

- 146.6 MG/L - 96 H

(DIN 38412)

(DIN 38412)

TOXICITY TO DAPHNIA AND

STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) -

OTHER AOUATIC

51.25 MG/L - 48 H

INVERTEBRATES TOXICITY TO ALGAE

STATIC TEST EC50 - DESMODESMUS SUBSPICATUS

(SCENEDESMUS SUBSPICATUS) - 45.1 MG/L - 72 H

PERSISTENCE AND **DEGRADABILITY**

BIODEGRADABILITY ZAHN-WELLENS TEST - EXPOSURE TIME 10 D

RESULT: > 95 % - INHERENTLY BIODEGRADABLE.

(OECD TEST GUIDELINE 302B)

BIOACCUMULATIVE POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL

NO DATA AVAILABLE

ASSESSMENT

RESULTS OF PBT AND VPVB PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT

REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS

AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED IN THE EVENT OF UNPROFESSIONAL

HANDLING OR DISPOSAL. HARMFUL TO AQUATIC LIFE.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH

AN AFTERBURNER AND SCRUBBER B HIGHLY

FLAMMABLE. OFFER SURPLUS AND NONRECYCLABLE

SOLUTIONS TO A LICENSED DISPOSAL COMPANY.

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL

SERVICE TO DISPOSE OF THIS MATERIAL.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: (Isobutyric acid) UN NUMBER: 2529
CLASS: 3 (8)
PACKING GROUP: III

REPORTABLE QUANTITY 5000 LBS

(RQ):

POISON INHALATION NO

HAZARD:

IMDG

PROPER SHIPPING NAME: (Isobutyric acid)

UN NUMBER: 2529
CLASS: 3 (8)
PACKING GROUP: III
EMS-NO: F-E, S-C

IATA

PROPER SHIPPING NAME: (Isobutyric acid)

UN NUMBER: 2529 CLASS: 3 (8) PACKING GROUP: III

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO

THE REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

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 FIRE HAZARD, ACUTE HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Isobutyric acid 79-31-2 04-24-1993

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Isobutyric acid 79-31-2 04-24-1993

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Isobutyric acid 79-31-2 04-24-1993

CALIFORNIA PROP. 65 COMPONENTS

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM

SECTION 16. OTHER INFORMATION

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

H226 FLAMMABLE LIQUID AND VAPOUR.

H302 HARMFUL IF SWALLOWED.
H311 TOXIC IN CONTACT WITH SKIN.

H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

H318 CAUSES SERIOUS EYE DAMAGE H402 HARMFUL TO AQUATIC LIFE.

HMIS RATING

HEALTH HAZARD: 3

CHRONIC HEALTH

HAZARD:

FLAMMABILITY: 2 PHYSICAL HAZARD 0

NFPA RATING

HEALTH HAZARD: 2 FIRE HAZARD: 4 REACTIVITY HAZARD: 0

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL 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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