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Wood Dale, IL 60191 USA Wood Dale, IL 60191 USA

SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 34836

NAME: α -Pinene

SYNONYMS: (\pm) -2-Pinene

2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene

24 HOUR EMERGENCY (80

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 SKIN IRRITATION (CATEGORY 2), H315 SKIN SENSITISATION (CATEGORY 1), H317 ASPIRATION HAZARD (CATEGORY 1), H304 SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 3), H402 LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 2), H411

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)

H226 FLAMMABLE LIQUID AND VAPOUR.

H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.

H315 CAUSES SKIN IRRITATION.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H402 HARMFUL TO AQUATIC LIFE.

H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HO	OT SURFACES.
--	--------------

- NO SMOKING.

P233 KEEP CONTAINER TIGHTLY CLOSED.

P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT

P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING/

EQUIPMENT

P242 USE ONLY NON-SPARKING TOOLS

P243 TAKE PRECAUTIONARY MEASURES AGAINST STATIC

DISCHARGE.

P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.

P264 WASH SKIN THOROUGHLY AFTER HANDLING.

P272 CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED

OUT OF THE WORKPLACE.

P273 AVOID RELEASE TO THE ENVIRONMENT.

P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE

PROTECTION.

P301 + P310 IF SWALLOWED: IMMEDIATELY CALL A POISON

CENTER/DOCTOR.

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

CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER.

P331 DO NOT INDUCE VOMITING.

P333 + P313 IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/

ATTENTION.

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE

REUSE.

P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-

RESISTANT FOAM TO EXTINGUISH.

P391 COLLECT SPILLAGE

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

P405 STORE LOCKED UP.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE

DISPOSAL PLANT.

HAZARDS NOT NONE
OTHERWISE
CLASSIFIED
(HNOC) OR NOT
COVERED BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_{10}H_{16}$

MW: 136.24

CAS-NO. 80-56-8

PURITY: 95 - 100% (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
α-Pinene		
	FLAM. LIQ. 3; SKIN IRRIT. 2; SKIN SENS. 1; ASP. TOX. 1; AQUATIC ACUTE 1; AQUATIC CHRONIC 1; H226, H315, H317, H304, H400, H410 M-FACTOR - AQUATIC ACUTE: 1	<= 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 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 WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A

CONTACT PHYSICIAN.

IN CASE OF EYE FLUSH EYES WITH WATER AS A PRECAUTION

CONTACT

IF SWALLOWED DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY

MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH

WITH WATER. CONSULT A PHYSICIAN.

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 SUITABLE EXTINGUISHING MEDIA

EXTINGUISHING MEDIA DRY POWDER DRY SAND

UNSUITABLE EXTINGUISHING MEDIA

DO NOT USE WATER JET.

SPECIAL HAZARDS

ARISING FROM THE SUBSTANCE OR MIXTURE

CARBON OXIDES

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
PRECAUTIONS,
PROTECTIVE EQUIPMENT
AND EMERGENCY
PROCEDURES

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE

CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW

AREAS

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PRECAUTIONS

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO 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 NON-COMBUSTIBLE ABSORBENT MATERIAL, (E.G. SAND, EARTH, DIATOMACEOUS EARTH, VERMICULITE) AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL/NATIONAL 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.

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

COMPONENT	CAS-NO.	VALUE	CONTROL	BASIS
			PARAMETERS	
α-Pinene	80-56-8	TWA	20 PPM	USA. ACGIH
				THRESHOLD LIMIT
				VALUES (TLV)

REMARKS	DERMAL SENSITIZATION
	LUNG IRRITATION
	NOT CLASSIFIABLE AS A HUMAN CARCINOGEN
	VARIES

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

FACE SHIELD AND SAFETY GLASSES 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: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.4 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: CAMATRIL (KCL 730, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.4 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: CAMATRIL (KCL 730, 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, AND 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

PROTECTIONRESPIRATORS ARE APPROPRIATE USE A FULLFACE
RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US)

RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (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 PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO

ENVIRONMENTALDO SO. DO NOT LET PRODUCT ENTER DRAINS. **EXPOSURE**DISCHARGE INTO THE ENVIRONMENT MUST BE

AVOIDED.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Colorless liquid
ODOUR CHARACTERISTIC
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE

MELTING

POINT/FREEZING POINT

BOILING POINT 155 - 156 °C FLASH POINT 32 °C

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

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE 7 HPA AT 20 C (68 F) - OECD TEST GUIDELINE 104

VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY

WATER SOLUBILITY 0.00004 G/L AT 20 C - OECD TEST GUIDELINE 105 -

INSOLUBLE

PARTITION COEFFICIENT: LOG POW: 4.487 - OECD TEST GUIDELINE 107

N- OCTANOL/WATER

AUTO-IGNITION 255 C AT 996 HPA

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

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 NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

POSSIBILITY OF HAZARDOUS REACTIONS

VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR.

CONDITIONS TO AVOID HEAT, FLAMES AND SPARKS.

INCOMPATIBLE MATERIALS

STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER

FIRE CONDITIONS. - CARBON OXIDES

PRODUCTS 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 - 3,700 MG/KG

REMARKS: BRAIN AND COVERINGS: RECORDINGS FROM

SPECIFIC AREAS OF CNS.

BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED ACTIVITY). LUNGS, THORAX, OR RESPIRATION:OTHER

CHANGES.

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

SKIN HUMAN SKIN

CORROSION/IRRITATION RESULT: IRRITATING TO SKIN. - 15 MIN

(EPISKIN HUMAN SKIN MODEL TEST)

SERIOUS EYE

DAMAGE/EYE IRRITATION

NO DATA AVAILABLE

RESPIRATORY OR SKIN

SENSITISATION

IN VIVO ASSAY - MOUSE

RESULT: MAY CAUSE SENSITISATION BY SKIN CONTACT.

(OECD TEST GUIDELINE 429)

GERM CELL

MUTAGENICITY

AMES TEST S. TYPHIMURIUM **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 ON OSHA S LIST OF

REGULATED CARCINOGENS.

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: DT7000000

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT

BEEN THOROUGHLY INVESTIGATED.

SECTION 12. **ECOLOGICAL INFORMATION**

TOXICITY

TOXICITY TO FISH LC50 - PIMEPHALES PROMELAS (FATHEAD MINNOW) -

0.28 MG/L - 96.0 H

TOXICITY TO DAPHNIA AND

OTHER AQUATIC INVERTEBRATES

EC50 - DAPHNIA MAGNA (WATER FLEA) - 0.475 MG/L - 48 H

(OECD TEST GUIDELINE 202)

PERSISTENCE AND DEGRADABILITY

BIODEGRADABILITY AEROBIC - EXPOSURE TIME 28 D

RESULT: 62 % - READILY BIODEGRADABLE.

(OECD TEST GUIDELINE 301B)

REMARKS: THE 10 DAY TIME WINDOW CRITERION IS NOT

FULFILLED.

BIOACCUMULATIVE

POTENTIAL

NO DATA AVAILABLE

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 AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED

IN THE EVENT OF UNPROFESSIONAL HANDLING OR

DISPOSAL.

TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO

A LICENSED DISPOSAL COMPANY. BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS

MATERIAL IS HIGHLY FLAMMABLE. CONTACT A

LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO

DISPOSE OF THIS MATERIAL.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: ALPHA-PINENE

UN NUMBER: 2368 CLASS: 3 PACKING GROUP: III

REPORTABLE QUANTITY

(RQ):

MARINE POLLUTANT: YES POISON INHALATION NO

HAZARD

IMDG

PROPER SHIPPING NAME: ALPHA-PINENE

UN NUMBER: 2368
CLASS: 3
PACKING GROUP: III
EMS-NO: F-E, S-E
MARINE POLLUTANT: YES

IATA

PROPER SHIPPING NAME: ALPHA-PINENE

UN NUMBER: 2368 CLASS: 3 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 # REVISION DATE

α-Pinene 80-56-8 04-24-1993

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS # REVISION DATE

α-Pinene 80-56-8 04-24-1993

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS # REVISION DATE

α-Pinene 80-56-8 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.

H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.

H315 CAUSES SKIN IRRITATION.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H402 HARMFUL TO AQUATIC LIFE.

H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

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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