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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 31543

NAME: Dimethyl malonate

SYNONYMS: Malonic acid dimethyl ester

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 4), H227 EYE IRRITATION (CATEGORY 2A), H319

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

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM

SIGNAL WORD WARNING

HAZARD STATEMENT(S)

H227 COMBUSTIBLE LIQUID.

H319 CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT

SURFACES. NO SMOKING.

P264 WASH SKIN THOROUGHLY AFTER HANDLING.

P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE

PROTECTION.

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

MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND

EASY TO DO. CONTINUE RINSING.

IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ P337 + P313

ATTENTION.

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

ALCOHOL-RESISTANT FOAM TO EXTINGUISH.

P403 + P235STORE IN A WELL-VENTILATED PLACE. KEEP COOL. P501

DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED

WASTE DISPOSAL PLANT.

HAZARDS NOT

OTHERWISE

CLASSIFIED (HNOC) OR NOT COVERED

BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

NONE

MF: $C_5H_8O_4$

MW: 132.11

CAS-NO. 108-59-8

PURITY: ≥ 99% (Assay)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Dimethyl malonate		
	ELAM LIO 4: EVE IDDIT 24:	00 100 0/
	,	90 - 100 %
	H227, H319	

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

WASH OFF WITH SOAP AND PLENTY OF WATER.

CONSULT A PHYSICIAN.

IN CASE OF EYE

CONTACT

RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT

LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

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

EXTINGUISHING MEDIA

UNSUITABLE

EXTINGUISHING MEDIA

USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

CHEMICAL OR CARBON DIOXIDE.

DO NOT USE WATER JET.

SPECIAL HAZARDS ARISING FROM THE

SUBSTANCE OR MIXTURE

NO DATA AVAILABLE

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

PERSONALUSE PERSONAL PROTECTIVE EQUIPMENT. AVOIDPRECAUTIONS,BREATHING VAPOURS, MIST OR GAS. ENSURE

PROTECTIVEADEQUATE VENTILATION. REMOVE ALL SOURCES OFEQUIPMENT ANDIGNITION. BEWARE OF VAPOURS ACCUMULATING TOEMERGENCYFORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN

PROCEDURES ACCUMULATE IN LOW AREAS.

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE **PRECAUTIONS** TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

METHODS ANDCONTAIN SPILLAGE, AND THEN COLLECT WITH NON-MATERIALS FORCOMBUSTIBLE ABSORBENT MATERIAL, (E.G. SAND,CONTAINMENT ANDEARTH, DIATOMACEOUS EARTH, VERMICULITE) AND

PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL / NATIONAL REGULATIONS (SEE SECTION 13).

 ${\tt KEEP\,IN\,SUITABLE,\,CLOSED\,CONTAINERS\,FOR}$

DISPOSAL.

REFERENCE TO OTHER FOR DISPOSAL SEE SECTION 13.

SECTIONS

CLEANING UP

SECTION 7. HANDLING AND STORAGE

ANY INCOMPATIBILITIES

PRECAUTIONS FOR SAFE AVOID CONTACT WITH SKIN AND EYES. AVOID

HANDLING INHALATION OF VAPOUR OR MIST.

Store at RT

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 KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND

STORAGE, INCLUDING WELL-VENTILATED PLACE.

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. HAZARDOUS COMPONENTS WITHOUT WORKPLACE CONTROL PARAMETERS

EXPOSURE CONTROLS

APPROPRIATE HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE **ENGINEERING** AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND

CONTROLS AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO PROTECTION EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND

APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS

SUCH AS NIOSH (US) OR EN 166(EU).

SKIN HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR

PROTECTION 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: BUTYL-RUBBER

MINIMUM LAYER THICKNESS: 0.3 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:BUTOJECT (KCL 897, SIZE M)

SPLASH CONTACT

MATERIAL: NATURE LATEX/CHLOROPRENE

MINIMUM LAYER THICKNESS: 0.6 MM

BREAK THROUGH TIME: 30 MIN

MATERIAL TESTED:LAPREN (KCL 706, 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 IMPERVIOUS CLOTHING, THE TYPE OF PROTECTIVE

PROTECTION EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS

SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORY W PROTECTION R

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

RESPIRATOR WITH MULTIPURPOSE 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 ENVIRONMENTAL EXPOSURE PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO

SO. DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Colorless to pale yellow liquid ODOUR NO DATA AVAILABLE ODOUR THRESHOLD NO DATA AVAILABLE NO DATA AVAILABLE NO DATA AVAILABLE

MELTING

POINT/FREEZING POINT

INITIAL BOILING POINT 181 - 183 °C

AND BOILING RANGE

FLASH POINT 194 °C

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

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY 4.56 - (AIR = 1.0)

RELATIVE DENSITY 1.16

WATER SOLUBILITY 140.7 G/L AT 20 C - COMPLETELY SOLUBLE

PARTITION COEFFICIENT: LOG POW: -0.05 AT 20 C

N- OCTANOL/WATER

AUTO-IGNITION 440 C AT 1,013 HPA (760 MMHG)

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

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

OTHER SAFETY INFORMATION

RELATIVE VAPOUR

DENSITY

4.56 - (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

ACIDS, BASES, OXIDIZING AGENTS, REDUCING 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 LD50 ORAL - RAT - MALE AND FEMALE -> 2,000

MG/KG (OECD TEST GUIDELINE 401)

INHALATION: NO DATA AVAILABLE

INHALATION: IRRITATING TO RESPIRATORY SYSTEM.

LD50 DERMAL - RABBIT - > 5,000 MG/KG

NO DATA AVAILABLE

SKIN - RABBIT

CORROSION/IRRITATION RESULT: NO SKIN IRRITATION

(OECD TEST GUIDELINE 404)

SERIOUS EYE EYES - RABBIT

DAMAGE/EYE IRRITATION RESULT: IRRITATING TO EYES.

(OECD TEST GUIDELINE 405)

RESPIRATORY OR SKIN

SENSITISATION

BUEHLER TEST - GUINEA PIG RESULT: NOT A SKIN SENSITIZER. (OECD TEST GUIDELINE 406)

GERM CELL NO DATA AVAILABLE

MUTAGENICITY REVERSE MUTATION ASSAY

SALMONELLA 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 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: OO0950000

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE

NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

TOXICITY TO DAPHNIA AND S

OTHER AQUATIC INVERTEBRATES

TOXICITY TO ALGAE

STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA)

- > 1,000 MG/L - 48 H

STATIC TEST EC50 - DESMODESMUS SUBSPICATUS

(SCENEDESMUS SUBSPICATUS) - 386.4 MG/L - 72 H

(OECD TEST GUIDELINE 201)

PERSISTENCE AND DEGRADABILITY BIODEGRADABILITY

NO DATA AVAILABLE

AEROBIC - EXPOSURE TIME 28 D

RESULT: 99.5 % - READILY BIODEGRADABLE.

(OECD TEST GUIDELINE 301A)

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 NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS

TO A LICENSED DISPOSAL COMPANY. THIS

COMBUSTIBLE MATERIAL MAY BE BURNED IN A CHEMICAL INCINERATOR EQUIPPED WITH AN

AFTERBURNER AND SCRUBBER. 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: COMBUSTIBLE LIQUID, N.O.S. (Dimethyl malonate)

UN NUMBER: 1993 CLASS: NONE PACKING GROUP: III REPORTABLE QUANTITY

(RO):

POISON INHALATION NO

HAZARD:

IMDG NOT DANGEROUS GOODS

IATA NOT DANGEROUS GOODS

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

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

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Dimethyl malonate 108-59-8

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Dimethyl malonate 108-59-8

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.

EYE IRRIT. EYE IRRITATION
FLAM. LIQ. FLAMMABLE LIQUIDS
H227 COMBUSTIBLE LIQUID.

H319 CAUSES SERIOUS EYE IRRITATION.

HMIS RATING

HEALTH HAZARD: 2

CHRONIC HEALTH HAZARD:

FLAMMABILITY: 2 PHYSICAL HAZARD 0

NFPA RATING

HEALTH HAZARD: 2 FIRE HAZARD: 2 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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