



Methyl 3,3 dimethyl acrylate

Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of Compilation : February 13, 2022
Date of Revision : New Edition
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Supersedes date : None
Supersedes version : None

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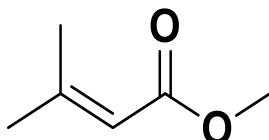
Safety Data Sheet

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product Identifier

Product name	: Methyl 3,3 dimethyl acrylate
CAS RN	: 924-50-5
EC#	: 213-107-4
Synonyms	: Crotonic acid, 3-methyl-, methyl ester; Senecioic acid, methyl ester; 3-Methyl-2-butenic acid methyl ester; 3-Methylcrotonic acid methyl ester; Methyl 3-methyl-2-butenate; Methyl 3-methylcrotonate; Methyl dimethylacrylate; Methyl senecioate; Methyl β,β -dimethylacrylate; Methyl β -methylcrotonate, Methyl 3-methylbut-2-enoate
Technical name	: Methyl 3-methylbut-2-enoate, Methyl 3-methyl-2-butenate
Molecular formula	: $C_6H_{10}O_2$
Structural formula	:



1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Methyl 3,3-dimethylacrylate is an important raw material and intermediate used in organic synthesis, pharmaceuticals agrochemicals and dyestuff fields

Uses advised against: None

1.3. Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited

FACTORY & REGISTERED OFFICE:

Jubilant Ingrevia Limited., Bhartiagram, Gajraula, District: Amroha, Uttar Pradesh-244223, India

T +91-5924-252353 to 252360 Contact Department-Safety: Ext. 7424 F +91-5924-252352,

Control Center Number: +919997022412

HEAD OFFICE: Jubilant Ingrevia Limited., Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 – India T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 support@jubl.com -

www.jubilantingrevia.com

1.4. Emergency telephone number

CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBERS:

North America: 1-800-255-3924

International: +1-813-248-0585

India: 000-800-100-4086

Brazil: 0-800-591-6042

Mexico: 01-800-099-0731

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

GHS-US classification

Flammable liquids: Hazard Category 3

2.2 Label Elements

Pictograms: GHS02



Flame

Signal word: Warning!

Hazard and Precautionary Statements:

HAZARD STATEMENTS

H226: Flammable liquid and vapour.

PRECAUTIONARY STATEMENTS

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P241: Use explosion proof equipment.

P242: Use non-sparking tools.

P243: Take action to prevent static discharges.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P403+P235: Store in a well-ventilated place. Keep cool.

P501: Dispose of contents/container to local/regional/national/international regulations.

2.3 Other Hazards

Not known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance	CAS Number	EC Number	Assay/Purity
Methyl 3,3 dimethyl acrylate	924-50-5	213-107-4	NLT 99%

3.2 Mixtures

- Not applicable.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General information:** Remove soiled or soaked clothing immediately. If someone exposed to the product feels unwell, contact a doctor and show this safety data sheet. Adhere to personal protective measures when giving first aid.
- **Inhalation:** Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give

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oxygen. Obtain medical aid.

- **Eyes:** Rinse immediately with gently running water for 15 minutes, maintaining eyelids open. Consult at once an ophthalmologist or a physician. Summon a doctor immediately
- **Skin:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse.
- **Ingestion:** Call in a physician immediately and show him the Safety Data Sheet. Induce vomiting in case medical help is not readily available and when the patient is conscious (Vomit should not go into the respiratory air tract).

4.2. Most important symptoms and effects, both acute and delayed:

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 : Extinguishing media

SUITABLE EXTINGUISHING MEDIA:

Water mist, Foam, Carbon dioxide, Dry powder

5.2 : Special hazards arising from the substance or mixture

Specific hazards: Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3 : Advice for firefighters

Special protective equipment for fire-fighters: Impermeable protective clothing (jacket and trousers) with helmet. Use self-contained breathing apparatus.

Further information: Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 : Personal precautions, protective equipment and emergency procedures

Personal precautions: Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protective equipment, please refer to section 8.

6.2 : Environmental precautions

Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the product contaminates rivers and lakes or drains inform respective authorities. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal.

6.3 : Methods and materials for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. When picked up, treat material as prescribed under heading "Disposal". Containers in which spilt substance has been collected must be adequately labelled. Use spark-proof tools and explosion-proof equipment. Remove all sources of ignition.

6.4 : Reference to other sections

Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 : Precautions for safe handling

Safe Handling:

- Wash hands before breaks and immediately after handling the product.
- Wear personal protective equipment/face protection.
- Ensure adequate ventilation.
- Do not get in eyes, on skin, or on clothing.
- Keep away from open flames, hot surfaces and sources of ignition.
- Use only non-sparking tools.
- Take precautionary measures against static discharges
- Remove and wash contaminated clothing before re-use.
- Do not breathe mist or vapor.
- Do not taste or swallow.

7.2 : Storage

- Keep upright in properly labelled containers.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage
- Keep container tightly closed in a dry and well-ventilated place.
- Keep away from heat, sparks and flame.
- Do not store with strong oxidizers or other incompatible materials (see Section 10).

7.3 : Specific end use(s)

- Use as an important raw material and intermediate in organic synthesis, pharmaceuticals agrochemicals and dyestuff fields

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 : Control parameters

- This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2 : Exposure controls

General protective and hygiene measures



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- Wear protective gloves/protective clothing/eye protection/face protection.
- The standard precautionary measures should be adhered to when handling
- Wash hands during breaks and at the end of handling the material
- Immediately remove any contaminated clothing

Appropriate Engineering Controls:

- Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

: Personal Protection

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Hands: Handle with gloves (Glove material: Nitrile rubber, Neoprene, Natural rubber, PVC), The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility etc.

Skin and body: Impervious clothing, 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. At the minimum, wear a laboratory coat and close-toed footwear.

Respiratory: Recommended respirators are NIOSH-approved N95 or CEN-approved FFP2 particulate respirators. These are to be only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of protection, a full-face supplied air respirator must be used.

: Occupational hygiene

- Foods, beverages and other articles of consumption must not be consumed at the work areas. Suitable areas are to be designated for these purposes.
- Avoid inhalation of vapour or mist.
- Avoid contact with clothing. Contaminated clothes must be exchanged and cleaned carefully.
- The skin must be washed with soap and water before breaks and at the end of work. Apply fatty skin-care products after washing.

: 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

9.1 : Information on basic physical and chemical properties.

Sr. No.	Parameter	Typical value
1.	Appearance	Dark Brown color liquid
2.	Molecular weight	114.14
3.	Odor	Unpleasant

Sr. No.	Parameter	Typical value
4.	Odor Threshold	No information available
5.	pH	6.5 – 7.5
6.	Melting/freezing point	-41 °C
7.	Boiling point	134 - 139°C at 1 013 hPa
8.	Flash point	33 °C at 1 013 mBar
9.	Evaporation rate (n-BuAc=1)	67.7 (Relative evaporation rate)
10.	Flammability	Flammable liquid
11.	Upper/lower flammability or Explosive limits	No information available
12.	Vapor pressure	20mBar at 20°C
13.	Vapour density (air=1)	No information available
14.	Density	0.936 g/L
15.	Solubility	Insoluble in water, Soluble in MDC, EDC, Ethyl acetate, Methanol, Ethanol etc.
16.	Partition coefficient (Octonol /water)	1.69 Temp: 25 °C
17.	Auto-ignition temperature	390 °C at 1013mBar
18.	Decomposition temperature	No information available
19.	Viscosity	No information available
20.	Explosive property	Explosive air/vapour mixtures possible

9.2 : Other information

- **DSC Result-** The thermogram shows an exothermic decomposition onset at 126°C with heat evolution of 31 J/g of sample (Severity: Low).

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:** Stable under recommended storage conditions.
- 10.2 Chemical stability:** Stable under recommended temperatures and pressures.
- 10.3 Possibility of hazardous reactions:** None under normal processing.
- 10.4 Conditions to avoid:.** Heat, flames and sparks or other sources of ignition.
- 10.5 Incompatible materials:** Strong oxidizing agents
- 10.6 Hazardous decomposition Products :** Carbon monoxide, Carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 : Information on toxicological effects

Acute Toxicity:

Acute oral toxicity: Oral LD50: (Rat): > 5 000 mg/kg bw

Skin irritation/corrosion : Not irritating

Eye damage/irritation: Not irritating

Respiratory or skin sensitization: Not sensitizing

Germ cell mutagenicity: Not Mutagenic.



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Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity: None known

Specific target organ system toxicity - repeated exposure: None known.

Specific target organ system toxicity - single exposure: None known

Aspiration hazard: No aspiration toxicity classification.

Additional information:

Information on likely routes of exposure

Product:

Potential Health Effects

Skin contact may result in inflammation characterized by itching, scaling, reddening, blistering, pain or dryness.

Eye contact may result in redness, pain or severe eye damage.

Inhalation may cause irritation of the lungs and respiratory system.

Overexposure may result in serious illness or death.

SECTION 12: ECOLOGICAL INFORMATION

12.1 : Toxicity

Acute hazards to the aquatic environment:

- Short-term toxicity to fish
LC50 (Brachydanio rerio): 350 - 500 mg/L
Exposure time: 96 h
- Short-term toxicity to aquatic invertebrates:
EC-50 (Daphnia magna): 800 - 1000 mg/L

12.2 : Persistence and degradability

Methyl 3,3 dimethyl acrylate	
Persistence and degradability	Inherent biodegradable

12.3 : Bio accumulative potential

Methyl 3,3 dimethyl acrylate	
Bio accumulative potential	Log BCF = 0.599 (BCF = 3.976). No bioaccumulation expected.
Log Kow	1.69 at 25 degree C

12.4 : Mobility in Soil

Methyl 3,3 dimethyl acrylate	
Soil Adsorp. Coeff. (Estimated)	Koc : 18.31 Log Koc: 1.263
Henry's Law Constant (Estimated)	Bond Method : 2.27E-004 atm-m3/mole Group Method: 6.74E-005 atm-m3/mole

12.5 : Other adverse effects

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- Results of PBT and vPvB assessment: Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.




SECTION 13: DISPOSAL CONSIDERATIONS

13.1 : Disposal of waste

- Product:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed. Product is not to be disposed of in sanitary sewers, storm sewers, or landfills
- Contaminated packaging:**
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

- This substance is considered to be Hazardous for transport by Air/ Rail/ Road and Sea and thus regulated by IATA/ ICAO/ US DOT/ IMO/ IMDG.

	ADR/ RID/ DOT	IMDG	IATA
14.1 UN number	UN3272	UN3272	UN3272
14.2 UN proper shipping name	ESTERS N.O.S.	ESTERS N.O.S.	Esters n.o.s.
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	III	III	III
			
14.5 Environmental hazards	No	No	No

14.6 Special instructions for user.

- The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of Marpol and IBC code

- Not applicable

SECTION 15: REGULATORY INFORMATION

Classification as per CLP Regulation 1272/2008:

Flammable liquids: Hazard Category 3

Hazard Statements:

H226

Chemical Inventory Lists:	Status
TSCA:	Listed



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EC Inventory	213-107-4
Canada(DSL/NDSL):	Listed (NDSL)
Taiwan Chemical Substance Inventory (TCSI)	Listed
New Zealand Inventory of Chemicals (NZIoC)	Not Listed
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed
Inventory of Existing and New Chemical Substances (ENCS)	Listed
Japan ISHL Existing Substances List (ISHL)	Listed
China: IECSC	Listed
Catalog of Hazardous chemical(2015) China	Not Listed
Existing Chemicals List (KECI)	Listed
Australian Inventory of Chemical Substances (AICS)	Not Listed

US Regulations

CERCLA Hazardous substance and Reportable Quantity

Product not listed

SARA 313

Product not listed

SARA 311/312 Hazard Categories

See section 2 for more information

CWA (Clean Water Act)

Product not listed

CAA (Clean Air Act):

Product not listed

California Proposition 65

Product not listed.

EU Regulations

Water Hazard Classes (WGK)

WGK 1

SECTION 16: OTHER INFORMATION

a) : Compilation information of safety data sheet

Date of Compilation	: July 12, 2022
Date of Revision	: New Edition
Revision due date	: June 2025
Revision Number	: 00
Version Name	: 1026Gj Ghs00 Div.03 sds Methyl 3,3 dimethyl acrylate
Supersedes date	: None
Supersedes version	: None

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b) A key or legend to aberrations and acronyms used in the safety data sheet

SCBA	= Self Contained Breathing Apparatus.
NIOSH REL	= National Institute for Occupational Safety and Health Recommended Exposure Limit.
OSHA PEL	= Occupational Safety and Health Administration Permissible Exposure Limit.
RTECS	= Registry of Toxic Effects of Chemical Substances.
IARC	= International Agency for Research on Cancer.
TSCA	= Toxic Substances Control Act.
DSL/NDSL	= Domestic/Non-Domestic Substances List.
TLV	= Threshold Limit Value.
ACGIH	= American Conference of Governmental Industrial Hygienists.
REACH	= Registration, Evaluation, Authorization and Restriction of Chemicals.
CLP	= Classification, Labeling and Packaging.
GHS	= Globally Harmonized System.
IMDG-Code	= International Maritime Code for Dangerous Goods.
ICAO	= International Civil Aviation Organization.
IATA/DGR	= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 830/2015

d) List of hazard statements

Hazards Statements	H226: Flammable liquid and vapour.
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SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

(End of Safety Data Sheet)