3-METHYL-3-PENTEN-2-ONE

Safety Data Sheet

Supersedes: 20/07/2022 Revision: 1.3 Revision date: 12/12/2023

SECTION 1: Identification

1.1 Identification

Product form	:	Substance
Substance name	:	3-Methyl-3-Penten-2-One
CAS No	:	565-62-8
EC/ List No	:	209-283-7
Formula	:	$C_6H_{10}O$
Molecular weight	:	98.14 g/mol
Synonyms	:	3-Penten-2-one, 3-methyl- 3-Methyl-2-penten-4-one, 3methylpent-3-en-2-one

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

Use of the substance/mixture	:	Intermediate

1.3 Details of the supplier of the safety data sheet

Godavari Biorefineries Ltd.
45/47, Somaiya bhavan,
Mahatma Gandhi Road,
Fort, Mumbai -400001, INDIA.
T 0091 22 22048272
Email: alka@somaiya.com
www.somaiya.com

1.4 Emergency telephone Number

Emergency number	:	0091 2423 279308 0091 22 22048272 (Monday – Friday - 09.30 hrs to 18.00 hrs)

SECTION 2: Hazard(s) identification

GHS classification

2.1 Classification of the substance or mixture

Flammable liquids Category 3	:	Flammable liquids (Category 3), H226 Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Specific target organ toxicity - single exposure (Category 3), H335, Target Organs - Respiratory system. For the full text of the H-Statements mentioned in this Section, see Section 16

Skin corrosion/irritation Category 1B

2.2: GHS labeling

Hazard pictograms (GHS)

GHS02

GHS07

Signal word (GHS)	:	Danger
Hazard statements (GHS)	:	H226-Flammable liquid and vapour
	:	H315 -Causes skin irritation.
	:	H319-Causes serious eye irritation.
	:	H335 -May cause respiratory irritation

Precautionary statements (GHS)

P210	:	Keep away from heat, sparks, open flames, hot surfaces. - No smoking
P261	:	Avoid breathing dust/fume/gas/mist/vapours/spray
P 280	:	Wear protective gloves/ protective clothing
P303 + P361 + P353	:	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340	:	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378	:	In case of fire: Use fire water spray, extinguishing powder, alcohol resistant foam to extinguish.
P403 + P235	:	Store in a well-ventilated place. Keep container tightly closed

2.3 Other hazards

Other hazards not contributing to the Classification : None.

2.4 Unknown acute toxicity (GHS)

Not applicable.

SECTION 3: Composition/Information on ingredients

3.1 Substance

Substance type		(3E)-3-methyl 3-penten-2-one	
Name	**Product identifier** **CAS No.** **EC No.** **Index No.**	**Concentration %**	**GHS classification**
3-Methyl-3-Penten-2-One	565-62-8 209-283-7 NA	Minimum 99 %	Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Acute Tox. 4; H226, H315, H319, H335, H302, H312, H332

Full text of hazard classes and H-statements: see section 16

3.2 Mixture

Not applicable.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	:	Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
Inhalation	:	Remove the victim into fresh air. Immediately consult a doctor/medical service.
Skin contact	:	Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service
Eye contact	:	Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.
Ingestion	:	Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Immediately consult a doctor/medical service. Ingestion of large quantities: immediately to hospital

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	:	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after skin contact	:	
Symptoms/injuries after eye contact	:	
Symptoms/injuries after ingestion	:	
Chronic symptoms	:	

4.3 Indication of any immediate medical attention and special treatment needed

Seek medical assistance.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water
Unsuitable extinguishing media	:	solid streams of water

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	DIRECT FIRE HAZARD. Flammable. Gas/vapor flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks
Hazardous combustion products:	:	Carbon oxides
Explosion hazard	:	DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks.
Reactivity	:	On heating: release of corrosive/combustible gases/vapours. Upon combustion: CO2 formed. Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers:

5.3 Advice for firefighters

Firefighting instructions	:	Cool tanks/drums with water spray/remove them into safety location. Do not move the load if exposed to heat. .
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.

5.4 Additional information

Be Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment	:	Gas-tight chemical suit. Corrosion-proof suit. Refer "Material-Handling" to select protective clothing.
Emergency procedures	:	Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop nearby engines and no smoking. No naked flames or sparks. Use Spark- and explosion-proof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.

For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Stop leak if safe to do so. Ventilate area.

6.2 Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers, water bodies.

6.3 Methods and material for containment and cleaning up

Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

For containment	:	Contain released substance, transfer (pump) into suitable containers. Use compatible material of containers. Try to reduce evaporation. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.
Methods for cleaning up	:	Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/ authorized disposal facility. Wash clothing and equipment after handling.

6.4 Reference to other sections

For personal protection see section

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions for safe handling	:	Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosion proof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosion proof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Exhaust gas must be neutralised.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature	:	Keep tightly closed in a dry, cool and well-ventilated place.
Heat-ignition	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) bases. metals. alcohols. amines. water/moisture.
Storage area	:	Store in a Cool/ dry area. Ventilation at floor level. Keep out of direct sunlight. Fireproof storeroom. Keep locked up. Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packaging's in solid containers.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

3-Methyl-3-Penten-2-One (565-62-8)

ACGIH	:	ACGIH TWA (ppm)	To the best of our knowledge, the chemical, physical, Exposure and toxicological properties have not been thoroughly investigated.
ACGIH	:	ACGIH STEL (ppm)	
OSHA	:	OSHA PEL (TWA) (mg/m³)	
OSHA	:	OSHA PEL (TWA) (ppm)	
IDLH	:	US IDLH (ppm)	
NIOSH	:	NIOSH REL (TWA) (mg/m³)	
NIOSH	:	NIOSH REL (TWA) (ppm)	
NIOSH	:	NIOSH REL (STEL) (mg/m³)	
NIOSH	:	NIOSH REL (STEL) (ppm)	

8.2 Exposure controls

Appropriate engineering controls	:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Material should be handled safely.
Personal protective equipment	:	 Protective goggles. Gloves. Protective clothing. Face shield. Gas mask with filter.
Materials for protective clothing	:	GIVE EXCELLENT RESISTANCE: butyl rubber. polyethylene/ethylene vinyl alcohol. viton. GIVE GOOD RESISTANCE: neoprene. GIVE LESS RESISTANCE: natural rubber. PVC. GIVE POOR RESISTANCE: polyethylene. PVA.
Hand protection	:	Gloves.
Eye protection	:	Safety glasses.
Skin and body protection	:	Head/neck protection. Corrosion-proof clothing.
Respiratory protection	:	Wear gas mask with filter type A if conc. in air > exposure limit. High vapour/ gas concentration: self-contained respirator.
Thermal hazard protection	:	None.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid
Colour	:	Colourless of pale yellow
Odour	:	Characteristic
pH	:	No Data Available
Melting point	:	-70 °C
Freezing point	:	No Data Available
Initial boiling point/boiling range	:	138 °C
Flash Point	:	29 °C closed cup
Relative evaporation rate	:	No Data Available
Relative density	:	0.875 g/cm^3 at 20^{0}C
Relative vapour density	:	No information available
Specific gravity/ density	:	0.902 kg/m^3
Molecular mass	:	98.14 g/mol
Flammability(Solid, Gas)	:	No data available
Upper/lower flammability or Explosive limit	:	No Data Available
Solubility	:	Water, 29.1 g/L @ 20 °C (exp)
Vapor pressure	:	No Data Available
Vapour density	:	No Data Available
Evaporation Rate	:	No Data Available
Partition coefficient n-octanol/water	:	No Data Available
Auto-ignition temperature	:	No Data Available
Decomposition temperature	:	No Data Available
Viscosity	:	No Data Available
Oxidizing properties	:	No Data Available

9.2 Other information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Stable under normal conditions of handling, use and transportation.
10.2 Chemical Stability	:	Stable under normal conditions of handling, use and transportation.
10.3 Possibility of hazardous reactions	:	Presents no significant reactivity hazard, by itself or in contact with water.
10.4 Conditions to avoid	:	Avoid any source of ignition. Avoid contact with heat, sparks, open flame, and static discharge.
10.5 Incompatible materials	:	Avoid contact with strong acids, alkali or oxidizing agents.
10.6 Hazardous decomposition products	:	Carbon dioxide (CO2). Carbon monoxide (CO)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	:	No data available
On the skin	:	Irritant for skin & mucous membranes.
On the Eye	:	Irritant effect
Sensitization	:	No sensitizing effect known
Germ cell mutagenicity	:	No data available
Carcinogenicity	:	No data available
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
ACGIH:	:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
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
Teratogenicity	:	No data available
Specific target organ toxicity - single exposure (Globally Harmonized System)	:	Acute oral toxicity - Possible damages:, Irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract. Acute inhalation toxicity - Possible damages:, mucosal irritations, Cough, Shortness of breath, Nausea, Vomiting
Specific target organ toxicity - repeated exposure (Globally Harmonized System)	:	No data available
Aspiration hazard	:	No data available
Signs and Symptoms of Exposure	:	No data available
Synergistic effects	:	No data available
LD50 oral toxicity	:	No data available
LD50 dermal toxicity	:	No data available
LC50 inhalation toxicity	:	No data available

SECTION 12: Ecological information

12.1 Toxicity

Ecology – general	:	Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology – air	:	Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/II.
Ecology – water	:	Slightly harmful to fishes and invertebrates (Daphnia). Not harmful to algae

3-Methyl-3-Penten-2-One (565-62-8)				
		Toxicity to Fish	Toxicity to aquatic invertebrates	Toxicity to Microorganisms
Species		No data available		
Value				
Exposure time				

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal recommendations	:	Remove and dispose waste in accordance with local and/or national regulations. Recommended practice of distillation, physico-chemical/biological treatment and authorized waste incinerator for solvents with energy recovery. Do not discharge into drains or the environment.

SECTION 14 : TRANSPORT INFORMATION

Marine transport (IMDG)

UN number	:	UN1224
Proper shipping name and description	:	KETONES, LIQUID, N.O.S. (3-METHYL-3-PENTEN-2-ONE)
Chemical name	:	3-METHYL-3-PENTEN-2-ONE
Class	:	3
Packaging group	:	III
Labels	:	3
EmS code	:	F-E, S-D
Marine pollutant	:	No

Air transport ICAO/IATA		
UN number	:	UN1224
Proper shipping name and description	:	KETONES, LIQUID, N.O.S. (3-METHYL-3-PENTEN-2-ONE)
Chemical name	:	3-METHYL-3-PENTEN-2-ONE
Class	:	3
Labels	:	3
Packaging group	:	III
Hazard Labels	:	Flammable liquid
Environmentally hazardous	:	No

Department of Transportation (DOT)		
UN number	:	UN1224
Proper shipping name and description	:	KETONES, LIQUID, N.O.S. (3-METHYL-3-PENTEN-2-ONE)
Class	:	3
Packaging group	:	III
Reportable Quantity (RQ)	:	No
Poison Inhalation hazard	:	No
Hazard labels (DOT)	:	

3 - Flammable liquid

SECTION 15: Regulatory information

15.1 International regulations

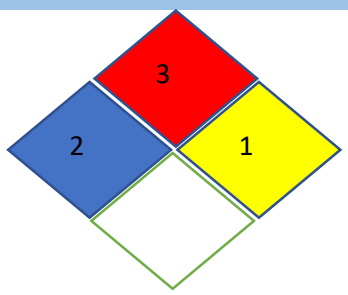
Country	National Inventories	Listing
AUSTRALIA	AICS	Listed
CANADA	DSL	Listed
CHINA	IECSC	Listed
EUROPE	EC	Listed
JAPAN	ENCS	Listed
NEWZEALAND	NZIoC	Listed
PHILIPPINES	PICCS	Listed
SOUTH KOREA	KECI	Listed
TAIWAN	TCSI	Listed
USA	TSCA	Listed

SECTION 16: Other information

16.1 Hazard Statement

H226	:	Flammable liquid and vapour
H315	:	Causes skin irritation.
H319	:	Causes serious eye irritation.
H335	:	May cause respiratory irritation

16.2 NFPA Rating



16.3 Abbreviations and acronyms

:

PBT =Persistent Bioaccumulative and Toxic
vPvB= Very Persistent and Very Bioaccumulative
SCBA= Self Contained Breathing Apparatus
NIOSH REL= National Institute for Occupational Safety and Health Recommended Exposure Limit
OSHA PEL=Occupational Safety and Health Adminstration Permissible Exposure Limit
OELTWA= Occupational Exposure Limit Time Weighted Averages
IDLH= Immediately Dangerous to Life or Health
UEL= Upper Explosive Limit
LEL= Lower Explosive Limit
RTECS= Registry of Toxic Effects of Chemical Substances
NTP=National Toxicology Programm
IARC= International Agency for Research on Cancer
EPA=Environmental Protection Agency
TSCA= Toxic Substances Control Act
NFPA= National Fire Protection Association
CSR=Chemical Safety Report
BCF = Bio Concentration Factor
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration
TLV = Threshhold Limit Value
ACGIH = American Conference of Governmental Industrial Hygienist
REACH = Registration, Evaluation .Authorisation and Restriction of Chemicals
CLP = Classification, Labelling and Packaging
LD / LC = Lethal Doses / Lethal Concentration
GHS = Globally Harmonised System
ADR = Accord europeen relative au transport international de marchandises
IMDG-Code = International Maritime Code for Dangerous Goods
EmS = Emergency measures on Sea
ICAO = International Civil Aviation Organization
IATA/DGR= International Air Transport Association/Dangerous Goods Regulation

16.4 Further information:

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