

MATERIAL SAFETY DATA SHEET

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Issue Date:

1- Chemical Product Information and Company Identification.

Product Name: :Methyl Acetoacetate GC reference standard, Anstan[®].
Synonym: : Acetoacetic Acid Methyl Ester.
Product code: : BS14356.
CAS Number: : 105-45-3.
Company Name: : Briti Scientific.
Company Address: : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055.
Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
105-45-3.	Acetoacetic Acid Methyl Ester.	C ₅ H ₈ O ₃ .

Section 3- Hazards Identification.

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids Category 4

Serious Eye Damage/Eye Irritation Category 1

Label Elements

Signal Word

Danger

Hazard Statements

Combustible liquid

Causes serious eye damage



Precautionary Statements

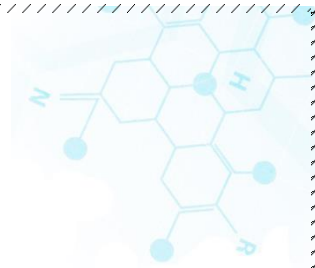
Prevention

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Eyes





IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Section 4- First Aid Measures.

General Advice: If symptoms persist, call a physician

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion: Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Notes to Physician: Treat symptomatically

Section 5- Fire Fighting Measures.

Suitable Extinguishing Media: Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers

Unsuitable Extinguishing Media: No information available

Flash Point 67 °C / 152.6 °F

Method - No information available

Autoignition Temperature 280 °C / 536 °F

Explosion Limits

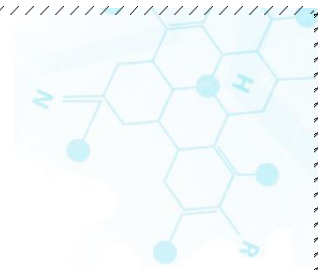
Upper 16%

Lower 3.1%

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available





Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixture with air. Combustible material.

Containers may explode when heated.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2	2	0	N/A

Section 6- Accidental Release Measures.

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions: Should not be released into the environment.

Methods for Containment and Clean Up:

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition.

Section 7- Handling and Storage.

Handling: Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition.

Storage: Keep away from heat, sparks and flame. Protect from light. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Bases. Strong acids. Strong oxidizing agents. Reducing Agent.

Section 8- Exposure Control/Personal Protection.

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

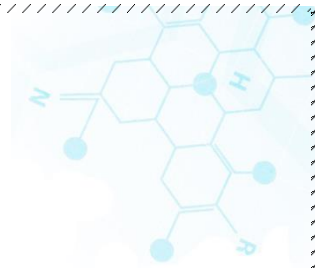
Engineering Measures: Ensure adequate ventilation, especially in confined areas. Ensure that eye wash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection: 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.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.





Respiratory Protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice

Section 9- Physical and Chemical Properties.

Appearance	Colorless clear liquid.
Odor	Pleasant
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-80 °C.
Boiling Point/Range	170 °C.
Flash Point	67 °C / 152.6 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	16%
Lower	3.1%
Vapor Pressure	No information available
Density	1.076 g/ml.
Solubility	Soluble in chloroform.
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	280 °C / 536 °F
Decomposition Temperature	No information available
Viscosity	1.8 mPa.s at 20 °C
Molecular Formula	C ₅ H ₈ O ₃
Molecular Weight	116.12 g/mol.

Section 10- Stability and Reactivity.

Reactive Hazard: None known, based on information available

Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible products. Keep away from open flames, hot surfaces and sources of ignition

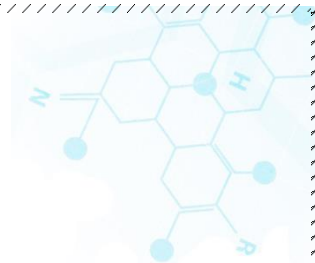
Incompatible Materials: Bases, Strong acids, Strong oxidizing agents, Reducing Agent

Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization: Hazardous polymerization does not occur.

Hazardous Reactions: None under normal processing.





Section 11- Toxicological Information.

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methylacetoacetate	2800 mg/kg (Rat)	>2000 mg/kg (Rat)	LC50 > 49.2 mg/L (Rat) 4h

Toxicologically Synergistic Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes

Sensitization No information available

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

Section 12- Ecological Information.

Ecotoxicity: Do not empty into drains.

Persistence and Degradability: Persistence is unlikely

Bioaccumulation/ Accumulation: No information available.

Mobility: Will likely be mobile in the environment due to its water solubility

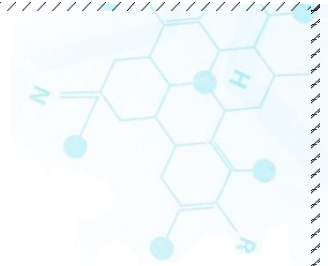
Component log Pow

Methylacetoacetate -0.4

Section 13- Disposal Considerations.

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.





Section 14- Transport Information.

DOT COMBUSTIBLE LIQUID, NOT REGULATED FOR TRANSPORT IN THIS QUANTITY

According to 49 CFR §173.150(f)(1), this material should be reclassified as NA1993, Combustible Liquid, NOS if it is shipped in bulk.

UN-No NA1993

Proper Shipping Name Combustible liquid, n.o.s. Packing Group III

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

Section 15- Regulatory Information.

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and

Health Administration

Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

Section 16- Other Information.

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

