MATERIAL SAFETY DATA SHEET

Version :02

PRODUCT NAME: METHYL ACETOACETATE CAS Number: 105-45-3

1. IDENTIFICATION:

Product Code	:	**98808**
Company Name	:	ADVENT CHEMBIO PRIVATE LIMITED
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2. HAZARDS IDENTIFICATION:

Hazard classification

Health hazards

Serious eye damage : Category 2

Labels elements :

Hazard symbol :



Signal word : Danger

Hazard statement : Causes serious eye damage.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Ground/ bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools. Take precautionary measures against static discharge.

Response : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Storage : Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Disposal : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification	:	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. COMPOSITION/ INFORMATION ON INGRADIENTS:

Ingredient	CAS Number	Percent	Hazardous
Methyl Acetoacetate	105-45-3	NLT 98.0%	No

4. FIRST AID MEASURES:

General information	:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion	:	Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation	:	Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.
Skin contact	:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Eye contact	:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Most important symptoms/effects, acute and delayed	:	Toxic if inhaled. Irritating to eyes, respiratory system and skin.
Indication of immediate medical attention and special treatment needed	:	Symptoms may be delayed. Treat symptomatically.

5. FIRE FIGHTING MEASURES:

General information	:	No data available

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	:	For this substance/mixture no limitations of extinguishing agents are given.

Special protective equipment and precautions for firefighters

Special firefighting procedures	:	Fight fire from a protected location. Move containers from fire area if you can do so without risk.
Special protective equipment for fire-fighters	:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures	:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
Notification Procedures	:	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
Environmental precautions	:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling	:	Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	:	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS PERSONAL PROTECTION:

Control parameters

Appropriate engineering controls	:	No data available

Individual protection measures, such as personal protective equipment

General information	:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
Eye/face protection	:	Wear safety glasses with side shields (or goggles).
Hand protection	:	Chemical resistant gloves.
Other	:	Wear suitable protective clothing.
Respiratory protection	:	In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

Hygiene measures	:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	:	Clear, colourless liquid.
Odor	:	No data available
Solubility	:	No data available
Formula	:	$C_5H_8O_3$
Molecular Weight	:	116.12 g/mol
Specific Gravity	:	1.076 g/cm^3
pH	:	No data available
% Volatiles by volume @ 21C (70F)	:	No data available
Boiling Point	:	169 - 170 °C at 93 hPa - lit.
Melting Point	:	-80 °C - lit.
Flash Point	:	70 °C - closed cup
Vapor Density (Air=1)	:	No data available
Vapor Pressure (mm Hg)	:	No data available
Evaporation Rate (BuAc=1)	:	No data available

10. STABILITY AND REACTIVITY:

Reactivity	:	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	:	Material is stable under ambient conditions.
Possibility of hazardous reactions	:	Violent reactions possible with: Oxidizing agents Bases.
Conditions to avoid	:	Strong heating.
Incompatible materials	:	No data available
Hazardous decomposition products	:	In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Inhalation Product	:	LD50 Oral - Rat - male - 2.580 mg/kg (OECD Test Guideline 401) Remarks: (ECHA) Inhalation: No data available LD50 Dermal - Rat - > 2.000 mg/kg Remarks: (ECHA)
Repeated dose toxicity Product	:	No data available.
Skin corrosion/irritation Product	:	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation Product	:	Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)
Respiratory or skin sensitization Product	:	Local lymph node assay (LLNA) - Mouse Result: Not a skin sensitizer. (OECD Test Guideline 429) Remarks: (ECHA)
Carcinogenicity Product	:	No data available
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	:	No data available
US. National Toxicology Program (NTP) Report on Carcinogens	:	No data available
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050	:	No data available
Germ cell mutagenicity	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster fibroblasts Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
In vitro Product	:	No data available.
Reproductive toxicity Product	:	No data available.
Specific target organ toxicity - single exposure	:	No data available.

Product

Specific target organ toxicity - repeated exposure Product	:	No data available.
Aspiration hazard Product	:	No data available.
Other effects	:	None known.

12. ECOLOGICAL INFORMATION:

Ecotoxicity

Acute hazards to the aquatic environment

Fish Product	:	LC50 - Pimephales promelas (fathead minnow) - > 111,4 mg/l - 96 h (OECD Test Guideline 203)
Aquatic invertebrates Product	:	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

Chronic hazards to the aquatic environment

Fish Product	:	No data available.
Aquatic invertebrates Product	:	No data available.
Toxicity to Aquatic Plants Product:	:	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

Persistence and degradability

Biodegradation Product	:	aerobic - Exposure time 28 d Result: 94 % - Readily biodegradable. (OECD Test Guideline 301F)
BOD/COD ratio Product	:	No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product	:	No data available.
Partition coefficient n-octanol / water (log Kow) Product	:	No data available.
Mobility in soil	:	No data available
Other adverse effects	:	Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATION:

Disposal instructions	:	Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.
Contaminated packaging	:	Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION:

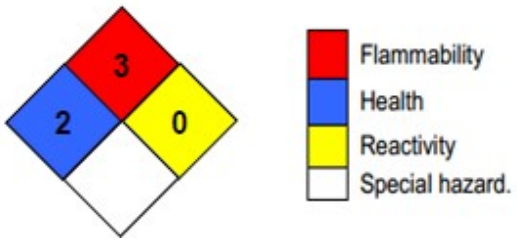
	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	NA	Methyl Acetoacetate	NA	Not dangerous goods	NA
IMDG	NA	Methyl Acetoacetate	NA	Not dangerous goods	NA
IATA	NA	Methyl Acetoacetate	NA	Not dangerous goods	NA

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. OTHER INFORMATION:

NFPA Hazard ID :



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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