

Eastman(TM) MAA (Methyl Acetoacetate)

Version Revision Date: SDS Number: Date of last issue: -
2.1 12/05/2017 150000001075 Date of first issue: 09/06/2016
PRD SDSUS / Z8 / 0001

SECTION 1. IDENTIFICATION

Product name : Eastman(TM) MAA (Methyl Acetoacetate)
Product code : 01437-00, P0143700, P0143708, P0143710, P0143706

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company
Address : 200 South Wilcox Drive
 : Kingsport TN 37660-5280
Telephone : (423) 229-2000
Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use


Recommended use : Solvent
 : Intermediate
Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4
Serious eye damage : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H227 Combustible liquid.
 : H318 Causes serious eye damage.

Precautionary Statements : **Prevention:**
 : P210 Keep away from heat/sparks/open flames/hot surfaces.
 : No smoking.
 : P280 Wear protective gloves/ eye protection/ face protection.
Response:
 : P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with

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water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
methyl acetoacetate	105-45-3	100

SECTION 4. FIRST AID MEASURES

- If inhaled : Move to fresh air.
Treat symptomatically.
If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and water.
If symptoms persist, call a physician.
- In case of eye contact : Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
- If swallowed : Seek medical advice.
- Most important symptoms and effects, both acute and delayed : None known.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO2)
Dry chemical
Water spray
- Unsuitable extinguishing media : Water spray jet

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Specific hazards during fire fighting : Water may be ineffective.
The product will float on water and can be reignited on surface water.

Further information : Use water spray to cool unopened containers.

Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment.
Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions : Avoid release to the environment.

Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
After cleaning, flush away traces with water.
Eliminate all ignition sources if safe to do so.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : None known.

Advice on safe handling : Do not get in eyes.
Do not swallow.
Wash thoroughly after handling.
Keep away from fire (No Smoking).
Keep away from fire, sparks and heated surfaces.
Do not use sparking tools.

Conditions for safe storage : Keep container closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Engineering measures : Good general ventilation (typically 10 air changes per hour) should be sufficient to control airborne levels.
Ensure adequate ventilation.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates

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that exposures are within recommended exposure guidelines.

Hand protection

Remarks : Wear suitable gloves.

Eye protection

: Wear safety glasses with side shields (or goggles).
Face-shield
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Protective measures

: Remove respiratory and skin/eye protection only after vapors have been cleared from the area.
Ensure that eye flushing systems and safety showers are located close to the working place.
Use personal protective equipment as required.

Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Color	: colorless
Odor	: ester-like
Odor Threshold	: not determined
pH	: 4.1 Concentration: 10 g/l
Melting point/freezing point	: -30 °C
Boiling point/boiling range	: 164 °C (1,013 hPa)
Flash point	: 63.5 °C (1,013 hPa) Method: Pensky-Martens closed cup
Evaporation rate	: 0.12
Flammability (solid, gas)	: Not applicable
Self-ignition	: 375 °C
Upper explosion limit	: not determined
Lower explosion limit	: not determined
Vapor pressure	: 18.7 Pa (20 °C)

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Relative vapor density	:	4.0
Relative density	:	1.08 (20 °C)
Solubility(ies)		
Water solubility	:	> 1,000 g/l (20 °C)
Autoignition temperature	:	not determined
Decomposition temperature	:	Method: DTA Stable
Viscosity		
Viscosity, dynamic	:	1.74 mPa.s (20 °C)
Viscosity, kinematic	:	1.61 mm ² /s (20 °C)
Explosive properties	:	Not classified
Oxidizing properties	:	Not classified
Surface tension	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO ₂) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Ingredients:****methyl acetoacetate:**

Acute oral toxicity	:	LD50 Oral (Rat): 2,580 mg/kg
Acute inhalation toxicity	:	LC50 (Rabbit): > 49.2 mg/l Exposure time: 4 h
Acute dermal toxicity	:	LD50 Dermal (Rat): > 2,000 mg/kg

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Skin corrosion/irritationIngredients:**methyl acetoacetate:**

Species: Rabbit
Exposure time: 4 h
Result: none

Serious eye damage/eye irritationIngredients:**methyl acetoacetate:**

Species: Rabbit
Exposure time: 24 h

Respiratory or skin sensitizationIngredients:**methyl acetoacetate:**

Test Type: OECD 429: LLNA
Species: Mouse
Result: non-sensitizing

Germ cell mutagenicityIngredients:**methyl acetoacetate:**

Genotoxicity in vitro : Test Type: Salmonella typhimurium assay (Ames test)
Metabolic activation: +/- activation
Method: Bacterial Reverse Mutation Assay
Result: negative

Carcinogenicity**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Repeated dose toxicity**Ingredients:****methyl acetoacetate:**

Species: Rat
1000 mg/kg
Application Route: Oral Study
Exposure time: 28 d

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:****methyl acetoacetate:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 111.4 mg/l
Exposure time: 96 h

NOEC: (Pimephales promelas (fathead minnow)): 111.4 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 100 mg/l
aquatic invertebrates Exposure time: 48 h
Test Type: Immobilization

Toxicity to algae : EC50 (Chlorella pyrenoidosa): 100 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

Persistence and degradability**Ingredients:****methyl acetoacetate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 94 %
Exposure time: 28 d
Method: Ready Biodegradability: Manometric Respirometry
Test

Biochemical Oxygen De- : BOD-5:
mand (BOD) 310 mg/g

BOD-20:
770 mg/g

Chemical Oxygen Demand : 1,450 mg/g
(COD)

BOD/COD : BOD/COD: 21.4 %

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ThOD : 1,516 mg/g

Bioaccumulative potential**Ingredients:****methyl acetoacetate:**

Partition coefficient: n-octanol/water : log Pow: -0.4

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Ingredients:**methyl acetoacetate:**

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

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.
Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name : METHYL ACETOACETATE
Pollution category : Z
Ship type : 3

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Domestic regulation**49 CFR**

UN/ID/NA number	: NA 1993
Proper shipping name	: Combustible liquid, n.o.s. (methyl acetoacetate)
Class	: CBL
Packing group	: III
Labels	: None
ERG Code	: 128
Marine pollutant	: no
Remarks	: combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know****SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

Ingredients	CAS-No.	Component TPQ (lbs)
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SARA 311/312 Hazards	: Fire Hazard Acute Health Hazard
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SARA 313	: 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.
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Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

methyl acetoacetate	105-45-3	100 %
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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

The ingredients of this product are reported in the following inventories:

TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory

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ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

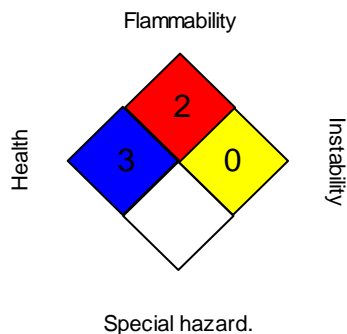
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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Further information

NFPA:



HMIS® IV:

HEALTH	3
FLAMMABILITY	2
PHYSICAL HAZARD	0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Revision Date : 12/05/2017

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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