Eastman(TM) MPK

Version	Revision Date:	SDS Number:	Date of last issue: 11/12/2018
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PRD		SDSUS / Z8 / 0001	

SECTION 1. IDENTIFICATION

Product name : Eastman(TM) MPK

Product code : 06548-00, P0654801, P0654806, P0654807, P0654808, P0654809, P0654800, E0654801

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

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 2

Acute toxicity (Oral) : Category 4

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.

Precautionary Statements :

Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
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

Components

Chemical name	CAS-No.	Concentration (% w/w)
methyl propyl ketone	107-87-9	> 90
methyl isobutyl ketone	108-10-1	< 10

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.
Remove contaminated clothing and shoes.
Get medical attention if symptoms occur.

In case of eye contact : Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.

If swallowed	:	Seek medical advice.
Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed. Causes serious eye irritation. Harmful if swallowed. Causes serious eye irritation.
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
Specific hazards during fire fighting	:	Water may be ineffective. The product will float on water and can be reignited on surface water.
Hazardous combustion products	:	No hazardous combustion products are known
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	:	Avoid inhalation of vapor or mist.

Do not get in eyes.
Avoid contact with skin, eyes and clothing.
Do not swallow.
Ensure adequate ventilation.
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

Components	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
methyl propyl ketone	107-87-9	STEL	150 ppm	ACGIH
		TWA	150 ppm 530 mg/m3	NIOSH REL
		TWA	200 ppm 700 mg/m3	OSHA Z-1
		TWA	200 ppm 700 mg/m3	OSHA P0
		STEL	250 ppm 875 mg/m3	OSHA P0
methyl isobutyl ketone	108-10-1	TWA	20 ppm	ACGIH
		STEL	75 ppm	ACGIH
		ST	75 ppm 300 mg/m3	NIOSH REL
		TWA	50 ppm 205 mg/m3	NIOSH REL
		TWA	100 ppm 410 mg/m3	OSHA Z-1
		TWA	50 ppm 205 mg/m3	OSHA P0
		STEL	75 ppm 300 mg/m3	OSHA P0

Engineering measures : Ensure adequate ventilation.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates 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	:	alcohol-like
Odor Threshold	:	11 ppm
pH	:	not determined
Melting point/range	:	-108 °F / -78 °C
Boiling point/boiling range	:	214 °F / 101 °C
Flash point	:	46.0 °F / 7.8 °C Method: Tag closed cup
Evaporation rate	:	2.3
Self-ignition	:	842 °F / 450 °C 1,013 hPa
Upper explosion limit / Upper flammability limit	:	8.7 %(V)
Lower explosion limit / Lower flammability limit	:	1.56 %(V)
Vapor pressure	:	37 mbar (68 °F / 20 °C)
Relative vapor density	:	2.9
Relative density	:	0.81 (68 °F / 20 °C)

Solubility(ies)		
Water solubility	:	Moderate
Partition coefficient: n-octanol/water	:	log Pow: 0.857 (68 °F / 20 °C)
Autoignition temperature	:	840 °F / 449 °C Method: ASTM D2155
Decomposition temperature	:	Method: DTA No exotherm to boiling
Viscosity		
Viscosity, dynamic	:	0.607 mPa.s (68 °F / 20 °C)
Viscosity, kinematic	:	not determined
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous decomposition products formed under fire conditions.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO2) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity	:	Remarks: Harmful if swallowed.
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	Remarks: No data available

Components:

methyl propyl ketone:

Acute oral toxicity : LD50 Oral (Rat): 1,600 mg/kg

Acute inhalation toxicity : LC50 (Rat): 25.5 mg/l
Exposure time: 4 h

methyl isobutyl ketone:

Acute oral toxicity : LD50 Oral (Rat): 2,080 mg/kg

Acute inhalation toxicity : LC50 (Rat): 16.4 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : No data available

Components:

methyl propyl ketone:

Species : Guinea pig
Exposure time : 24 h
Result : slight

methyl isobutyl ketone:

Species : Rabbit
Exposure time : 72 h
Result : none

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : No data available

Components:

methyl isobutyl ketone:

Species : Rabbit
Result : Eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Remarks : No data available

Germ cell mutagenicity

Not classified based on available information.

Components:

methyl propyl ketone:

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

Test Type: Mutagenicity - Mammalian
Metabolic activation: +/- activation
Method: In vitro Mammalian Cell Gene Mutation Test
Result: negative

Test Type: Mutagenicity - Mammalian
Metabolic activation: +/- activation
Method: In vitro Mammalian Chromosome Aberration Test
Result: negative

Carcinogenicity

Not classified based on available information.

Product:

Remarks : This information is not available.

IARC Group 2B: Possibly carcinogenic to humans
methyl isobutyl ketone 108-10-1

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.

Reproductive toxicity

Not classified based on available information.

Product:

Effects on fertility : Remarks: No data available

STOT-single exposure

Not classified based on available information.

Product:

Remarks : No data available

STOT-repeated exposure

Not classified based on available information.

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

methyl propyl ketone:

May be harmful if swallowed and enters airways.

methyl isobutyl ketone:

May be harmful if swallowed and enters airways.

Information on likely routes of exposure

Product:

Inhalation : Remarks: None known.

Skin contact : Remarks: None known.

Eye contact : Remarks: Causes serious eye irritation.

Ingestion : Remarks: Harmful if swallowed.

Further information

Product:

Remarks : None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

methyl propyl ketone:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,240 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 110 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : NOEC: (Chlorella pyrenoidosa): 74 mg/l
Exposure time: 72 h

EC50 (Chlorella pyrenoidosa): 150 mg/l
Exposure time: 72 h

methyl isobutyl ketone:

Toxicity to fish : LC50 (goldfish): 460 mg/l
Exposure time: 24 h

LC50 (golden orfe): 675 - 750 mg/l
Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 4,300 mg/l
Exposure time: 24 h

LC50 (Crangon crangon (shrimp)): 1,250 mg/l
Exposure time: 24 h

Persistence and degradability

Components:

methyl propyl ketone:

Biodegradability : Result: Readily biodegradable

Biochemical Oxygen Demand (BOD) : BOD-5:
1,380 mg/g

BOD-20:
1,800 mg/g

Chemical Oxygen Demand (COD) : 1,800 mg/g

methyl isobutyl ketone:

Biodegradability : Result: Readily biodegradable

Biochemical Oxygen Demand (BOD) : BOD-5:
1,940 - 2,060 mg/g

Chemical Oxygen Demand (COD) : 2,160 - 2,460 mg/g

ThOD : 2,720 mg/g

Bioaccumulative potential

Components:

methyl propyl ketone:

Partition coefficient: n-octanol/water : Pow: 0.857 (68 °F / 20 °C)

methyl isobutyl ketone:

Partition coefficient: n-octanol/water : Pow: 24
log Pow: 1.38

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 1224
Proper shipping name	:	Ketones, liquid, n.o.s. (methyl propyl ketone, methyl isobutyl ketone)
Class	:	3
Packing group	:	II
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	364
Packing instruction (passenger aircraft)	:	353

IMDG-Code

UN number	:	UN 1224
Proper shipping name	:	KETONES, LIQUID, N.O.S. (methyl propyl ketone, methyl isobutyl ketone)
Class	:	3
Packing group	:	II
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	no

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 1224
Proper shipping name	:	Ketones, liquid, n.o.s. (methyl propyl ketone, methyl isobutyl ketone)
Class	:	3
Packing group	:	II
Labels	:	FLAMMABLE LIQUID
ERG Code	:	127
Marine pollutant	:	no

Special precautions 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. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
methyl isobutyl ketone	108-10-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

methyl isobutyl ketone 108-10-1

California Prop. 65

WARNING: This product can expose you to chemicals including methyl isobutyl ketone, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

TSCA	:	All substances listed as active on the TSCA inventory
DSL	:	All components of this product are on the Canadian DSL

AICS	:	On the inventory, or in compliance with the inventory
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
TCSI	:	On the inventory, or in compliance with the inventory

TSCA list

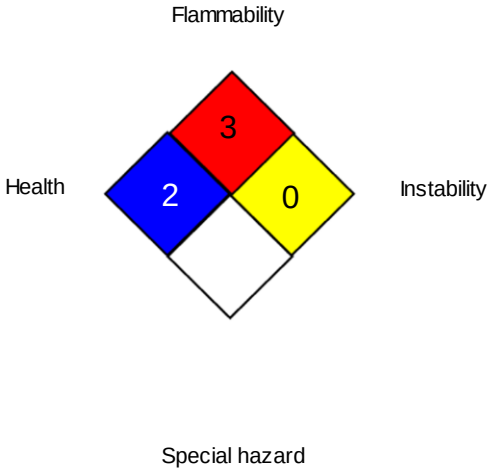
No substances are subject to a Significant New Use Rule.

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

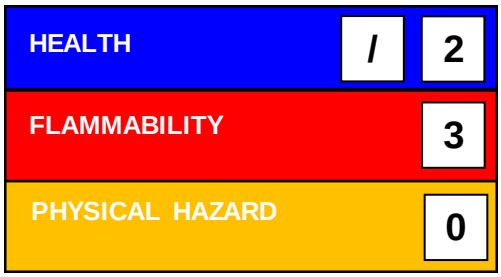
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



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.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average

ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average

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

Revision Date : 05/13/2020

The information provided in this 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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