SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard

EASTMAN

Eastman(TM) CHDM-D

PRD / SDSUS / Z8 / 0001

Version	Revision Date:	SDS Number:	Date of last issue: 09/08/2022
2.9	06/24/2024	150000001802	Date of first issue: 09/06/2016

SECTION 1. IDENTIFICATION

Product name : Eastman(TM) CHDM-D

Product code : 06792-00, P06792N2, P06792N4, P06792NT, E0679201, P06792N8, P06792NZ, P06792NK, P06792NM, 82000087, P06792NX, P06792N9, P06792NW

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company

Address : 200 South Wilcox Drive
Kingsport TN 37660-5147

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 : Chemical intermediate

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H318 Causes serious eye damage.

Precautionary Statements :

Prevention:

P280 Wear eye protection/ face protection.

Response:

P305 + P351 + P338 + P310 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/ doctor.

Other hazards

Molten material will produce thermal burns.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	CAS-No.	Concentration (% w/w)
1,4-cyclohexanedimethanol	105-08-8	>= 90 - <= 100

Eastman is committed to the safety, health and environment of our employees, our customers, and the communities we operate within. As part of this commitment, Eastman's Safety Data Sheets (SDS) are prepared in accordance with all applicable national and local regulations. The compositions of our documents reflect these requirements which include, but are not limited to, requirements under the Globally Harmonized System of Classification and Labeling (GHS). These compositions commonly involve the use of ranges versus specific analytical values. If you require a composition that is more specific , please refer to the Certificate of Analysis, sales specification, or contact your Customer Service Representative.

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.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Get immediate medical advice/ attention.

If swallowed : Seek medical advice.

Most important symptoms and effects, both acute and delayed : Causes serious eye damage.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray to extinguish.
Dry chemical
Carbon dioxide (CO2)

Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	None known.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	None known.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wear appropriate personal protective equipment. Only qualified personnel equipped with suitable protective equipment may intervene.
Environmental precautions	:	Avoid release to the environment.
Methods and materials for containment and cleaning up	:	Flush with water. Clean contaminated surface thoroughly. Prevent runoff from entering drains, sewers, or streams.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	None known.
Advice on safe handling	:	Do not get in eyes. Wash thoroughly after handling.
Conditions for safe storage	:	Keep container tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Ensure adequate ventilation.

Personal protective equipment

Respiratory protection	:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear a positive-pressure supplied-air respirator with full facepiece.

Eye protection	:	Wear a face shield when working with molten material. Wear safety glasses with side shields (or goggles).
Protective measures	:	PPE selections vary based on potential exposure conditions such as application, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material is based upon intended, normal usage.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Wax like
Color	:	off-white
Odor	:	mild
Odor Threshold	:	not determined
pH	:	Not applicable
Melting point/range	:	106 - 142 °F / 41 - 61 °C
Boiling point/boiling range	:	545.9 °F / 285.5 °C
Flash point	:	334 °F / 168 °C Method: Seta closed cup
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Not applicable
Self-ignition	:	601 °F / 316 °C Method: ASTM E659
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapor pressure	:	< 0.24 Pa (68 °F / 20 °C)
Relative vapor density	:	5

Relative density	:	1.082
Solubility(ies)		
Water solubility	:	34 - 143 g/l (77 °F / 25 °C)
Autoignition temperature	:	not determined
Decomposition temperature	:	Method: HPDTA No exotherm to 400°C
Self-Accelerating decomposition temperature (SADT)	:	GLP: Not applicable
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
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	:	None known. Stable
Conditions to avoid	:	Incompatible materials
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO2) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Remarks: No data available
Acute inhalation toxicity	:	Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : No data available

Components:

1,4-cyclohexanedimethanol:

Species : Rabbit
Exposure time : 24 h
Result : none

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : Causes serious eye damage.

Components:

1,4-cyclohexanedimethanol:

Species : Rabbit
Result : Corrosive
Exposure time : 24 h

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

Components:

1,4-cyclohexanedimethanol:

Test Type : OECD 406: Guinea pig sensitization
Species : Guinea pig
Result : Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

1,4-cyclohexanedimethanol:

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

Test Type: Ames test
Result: negative
Remarks: National Toxicology Program Study

Genotoxicity in vivo : Species: Rat
Application Route: oral: gavage
Method: Mammalian Bone Marrow Chromosome Aberration Test
Result: negative

Carcinogenicity

Not classified based on available information.

Product:

Remarks : This information is not available.

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.

Reproductive toxicity

Not classified based on available information.

Product:

Effects on fertility : Remarks: No data available

Components:

1,4-cyclohexanedimethanol:

Effects on fertility : Species: Rat, male and female
Application Route: Ingestion
General Toxicity Parent: NOAEL: 479 mg/kg body weight
Method: OECD Test Guideline 421

Species: Rat, male and female
Application Route: Ingestion
General Toxicity Parent: NOAEL: 700 mg/kg body weight
Method: OECD Test Guideline 443

STOT-single exposure

Not classified based on available information.

Product:

Remarks : No data available

Components:

1,4-cyclohexanedimethanol:

Assessment : Not classified

STOT-repeated exposure

Not classified based on available information.

Product:

Remarks : No data available

Components:

1,4-cyclohexanedimethanol:

Assessment : Not classified

Repeated dose toxicity

Components:

1,4-cyclohexanedimethanol:

Species	:	Rat, male
	:	479 mg/kg
Application Route	:	in drinking water
Exposure time	:	90 d
Species	:	Rat, female
	:	754 mg/kg
Application Route	:	in drinking water
Exposure time	:	90 h

Aspiration toxicity

Not classified based on available information.

Product:

No data available

Experience with human exposure

Product:

Inhalation : Remarks: None known.

Skin contact : Remarks: None known.

Eye contact : Remarks: Causes serious eye damage.

Ingestion : Remarks: None known.

Further information

Product:

Remarks : None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

1,4-cyclohexanedimethanol:

Toxicity to fish : LC50 (Fish): > 125.3 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Chlorella pyrenoidosa): > 122.9 mg/l
Exposure time: 72 h

NOEC: (Chlorella pyrenoidosa): >= 122.9 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): >= 125.3 mg/l

Persistence and degradability

Components:

1,4-cyclohexanedimethanol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99.2 %
Exposure time: 28 d
Method: Ready Biodegradability: DOC Die Away Test

Biochemical Oxygen Demand (BOD) : BOD-5:
25 mg/g

BOD-20:
1,400 mg/g

Chemical Oxygen Demand (COD) : 2,400 mg/g

Bioaccumulative potential

Components:

1,4-cyclohexanedimethanol:

Bioaccumulation : Bioconcentration factor (BCF): 4.45
Method: estimated

Partition coefficient: n-octanol/water : log Pow: 0.36 - 1.47 (77 °F / 25 °C)

Mobility in soil

Product:

Distribution among environmental compartments : log Koc: 0.499 - 1.6
Method: QSAR model

Components:

1,4-cyclohexanedimethanol:

Distribution among environmental compartments : log Koc: 0.499 - 1.6
Method: QSAR model

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

Not regulated as a dangerous good

Remarks : Solid forms of this product are not regulated. Forbidden on aircraft if transported molten in bulk at temperatures equal to or exceeding 100 C (212 F).

IMDG-Code

UN number	:	UN 3257
Proper shipping name	:	ELEVATED TEMPERATURE LIQUID, N.O.S. (1,4-cyclohexanedimethanol)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-P
Marine pollutant	:	no

Remarks : 9, Packing Group III when liquid is offered for transport or is transported, in bulk packaging, at or above 100°C and below its flash point; otherwise, not regulated.

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 3257
Proper shipping name	:	Elevated temperature liquid, n.o.s. (1,4-cyclohexanedimethanol)
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	no
Remarks	:	9, Packing Group III when liquid is offered for transport or is transported, in bulk packaging, at or above 100°C and below its flash point; otherwise, not regulated.

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

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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 : Serious eye damage or eye irritation

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.

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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

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

TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
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
NZIoC	:	On the inventory, or in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory

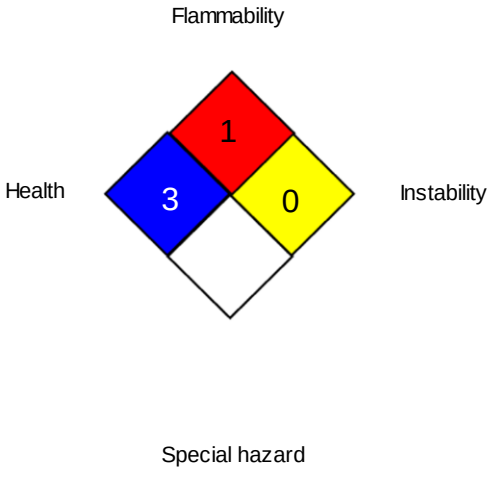
TSCA list
No substances are subject to a Significant New Use Rule.

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

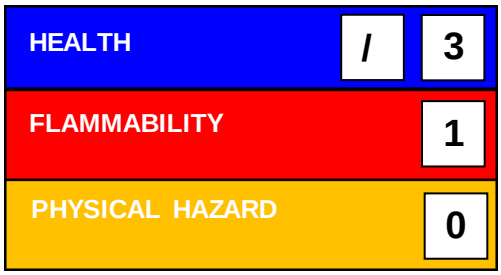
SECTION 16. OTHER INFORMATION

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

AIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals 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 : 06/24/2024

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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