

Eastman(TM) Choline Chloride 70 Feed

Version Revision Date: SDS Number: Date of last issue: 04.04.2018
1.3 01.07.2019 150000103178 Date of first issue: 30.03.2018
PRD SDSAU / EN / 0001

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Eastman(TM) Choline Chloride 70 Feed

Product code : 51002-00, P5100201

Manufacturer or supplier's details

Company : Eastman Chemical Company

Address : 200 South Wilcox Drive
Kingsport TN 37660-5280

Telephone : (423) 229-2000

Emergency telephone : +(61)-290372994 CHEMTREC: +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use

Recommended use : Feed additive

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

None known.

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

Chemical name	CAS-No.	Concentration (% w/w)
choline chloride	67-48-1	70

SECTION 4. FIRST AID MEASURES

General advice : Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.

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In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If easy to do, remove contact lens, if worn.

If swallowed : Consult a physician if necessary.

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)
Water spray
Alcohol-resistant foam
Dry sand

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products : Nitrogen oxides (NOx)
Carbon oxides

Specific extinguishing methods : Use a water spray to cool fully closed containers.
Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions : Avoid release to the environment.
Do not flush into surface water or sanitary sewer system.

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Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Prevent further leakage or spillage if safe to do so.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Keep product and empty container away from heat and sources of ignition.

Advice on safe handling : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

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

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.

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

Engineering measures : 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.

Personal protective equipment

Hand protection

Remarks : Rubber gloves Neoprene gloves The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.

Eye protection : Safety glasses with side-shields

Protective measures : Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Color : colourless
Odor : slight
Odor Threshold : not determined
pH : 6 - 9
Melting point/freezing point : -10 °C
Boiling point/boiling range : not determined
Flash point : > 200 °C

Evaporation rate : not determined
Flammability (solid, gas) : The product is not flammable.
Upper explosion limit / Upper flammability limit : not determined
Lower explosion limit / Lower flammability limit : not determined
Vapor pressure : 10 hPa (25 °C)
Relative vapor density : not determined
Density : 1.10 g/cm3 (20 °C)
Solubility(ies)
Water solubility : soluble
Partition coefficient: n-octanol/water : log Pow: -3.77 (25 °C)
Autoignition temperature : No data available
Decomposition temperature : 300 °C
Viscosity
Viscosity, dynamic : 26.2 mPa.s (20 °C)
Viscosity, kinematic : not determined
Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.

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Molecular weight : 139.6 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous decomposition products formed under fire conditions.
Conditions to avoid	: Heat Avoid moisture.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Nitrogen oxides (NOx) Carbon dioxide (CO ₂) Gaseous hydrogen chloride (HCl).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: LD50 (Rat): 5,450 mg/kg
Acute inhalation toxicity	: Remarks: No data available
Acute dermal toxicity	: Remarks: No data available

Skin corrosion/irritation

Product:

Species : Rabbit
Result : Non-irritating to the skin.

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : No eye irritation

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Respiratory or skin sensitization**Product:**

Result : Did not cause sensitization on laboratory animals.

Chronic toxicity**Germ cell mutagenicity****Product:**

Germ cell mutagenicity - Assessment : Did not show mutagenic effects in animal experiments.

Carcinogenicity**Product:**

Remarks : This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Remarks : No significant adverse effects were reported

Reproductive toxicity**Product:**

Effects on fertility : Remarks: No data available

Reproductive toxicity - Assessment : Did not show teratogenic effects in animal experiments.

STOT - single exposure**Product:**

Remarks : No data available

STOT - repeated exposure**Product:**

Remarks : No data available

Repeated dose toxicity**Product:**

Species : Rat
NOAEL : 1,300 - 2,900 mg/kg
Application Route : Oral

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Aspiration toxicity**Product:**

No data available

Information on likely routes of exposure**Product:**

Inhalation : Remarks: None known.
Skin contact : Remarks: None known.
Eye contact : Remarks: None known.
Ingestion : Remarks: None known.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Chlorella pyrenoidosa (aglae)): > 500 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50 (Pseudomonas putida): 132.8 mg/l
Exposure time: 17 h

Persistence and degradability**Product:**

Biodegradability : Remarks: Readily biodegradable

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Mobility in soil

No data available

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Other adverse effects**Product:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : In accordance with local and national regulations. Waste must be classified and labelled prior to recycling or disposal.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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

Not applicable for product as supplied.

Domestic regulation**ADG**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Standard for the Uniform : No poison schedule number allocated
Scheduling of Medicines and
Poisons

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under

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Commonwealth, State or Territory
legislation.

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

TSCA	: Listed on TSCA
DSL	: All components of this product are on the Canadian DSL
NDSL	: On the inventory, or in compliance with the inventory
EINECS	: On the inventory, or in compliance with the inventory
ELINCS	: On the inventory, or in compliance with the inventory
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
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Revision Date	: 01.07.2019
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Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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;

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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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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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