

SAFETY DATA SHEET

Monoethylamine

CHINA
AMINES

Version 1.3 PRD Revision Date: 21.03.2021 SDS Number: 150000103688 Date of last issue: 06.08.2019
SDSAU / EN / 0001 Date of first issue: 28.09.2017

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Monoethylamine
Product code : 51163-00, P5116301, P5116303, P5116302

Manufacturer or supplier's details

Company : China Amines Co., Ltd
Address : UNIT 1021, BEVERLEY COMMERCIAL CENTRE, 87-105CHATHAM
ROAD SOUTH, TSIM SHA TSUI, KOWLOON HONG KONG
Telephone : +86 18938922889
Emergency telephone : +86 18938922889

Recommended use of the chemical and restrictions on use

Recommended use : Transported isolated intermediate

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Gases under pressure : Liquefied gas
Flammable liquids : Category 1
Acute toxicity (Inhalation) : Category 4
Serious eye damage/eye irritation : Category 2A
Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H224 Extremely flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

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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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
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 for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal:

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

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Pure substance

Components

Chemical name	CAS-No.	Concentration (% w/w)
ethylamine	75-04-7	>= 60 -<= 100

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SECTION 4. FIRST AID MEASURES

- General advice : Show this safety data sheet to the doctor in attendance.
Call a physician immediately.
- If inhaled : Move to fresh air.
Get medical advice/ attention.
- In case of skin contact : Wash off with soap and water.
Get medical attention.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water
for at least 15 minutes.
Get medical advice/ attention.
- If swallowed : Do NOT induce vomiting.
Drink plenty of water.
- Most important symptoms and effects, both acute and delayed : irritant effects
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO₂)
Dry chemical
Water spray
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread
fire.
Do NOT use water jet.
- Specific hazards during fire fighting : May displace oxygen and cause rapid suffocation.
In a fire or if heated, a pressure increase will occur and the
container may burst, with the risk of a subsequent explosion.
- Hazardous combustion products : Nitrogen oxides (NO_x)
Carbon monoxide
- Specific extinguishing methods : In case of fire: Evacuate area. Fight fire remotely due to the
risk of explosion.
Cool containers/tanks with water spray.
- 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 measures : Wear appropriate personal protective equipment.
Local authorities should be advised if significant spillages

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levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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 : 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 : 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.

Skin and body protection : Wear suitable protective clothing.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquefied gas

Color : colourless

Odor : ammoniacal

Odor Threshold : not determined

pH : alkaline

Melting point/freezing point : -83.8 - -79 °C

Boiling point/boiling range : 16.6 °C

Flash point : -18 °C

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Evaporation rate : not determined

Flammability (solid, gas) : Flammable gas.

Upper explosion limit / Upper flammability limit : 14 %(V)

Lower explosion limit / Lower flammability limit : 3.5 %(V)

Vapor pressure : 990 hPa (20 °C)

Relative vapor density : 1.55
(Air = 1.0)

Relative density : 0.7

Density : 0.7 g/cm³ (21 °C)

Solubility(ies)
Water solubility : completely soluble

Partition coefficient: n-octanol/water : log Pow: -0.27

Autoignition temperature : 385 °C

Decomposition temperature : not determined

Viscosity
Viscosity, dynamic : not determined

Viscosity, kinematic : not determined

Explosive properties : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : 31.08 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous decomposition products formed under fire conditions.

Conditions to avoid : Protect container from physical shock.
Heat
Exposure to sunlight.
Keep under nitrogen.

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Incompatible materials : Strong acids and oxidizing agents
Peroxides
Zinc
Aluminium
Copper
Alcohols

Hazardous decomposition products : Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Remarks: No significant adverse effects were reported

Acute inhalation toxicity : LC50 (Rat): 6830 ppm
Exposure time: 4 h
Test atmosphere: gas
Remarks: Harmful if inhaled.

Acute dermal toxicity : Remarks: No significant adverse effects were reported

Serious eye damage/eye irritation

Product:

Remarks : Causes eye irritation.

Respiratory or skin sensitization

Components:

ethylamine:

Remarks : Not applicable

Chronic toxicity

Germ cell mutagenicity

Components:

ethylamine:

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

Carcinogenicity

Product:

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Remarks : This information is not available.

Components:

ethylamine:

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Components:

ethylamine:

Reproductive toxicity - Assessment : No toxicity to reproduction
Did not show teratogenic effects in animal experiments.

STOT - single exposure

Components:

ethylamine:

Routes of exposure : inhalation (gas)
Target Organs : Respiratory system
Assessment : May cause respiratory irritation.

Repeated dose toxicity

Components:

ethylamine:

Species : Rat
NOAEL : 100 ppm
Exposure time : 168 d

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks : None known.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

ethylamine:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 46 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7.9 mg/l
Exposure time: 48 h

Persistence and degradability

Components:

ethylamine:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Components:

ethylamine:

Bioaccumulation : Bioconcentration factor (BCF): < 1

Mobility in soil

Components:

ethylamine:

Distribution among environmental compartments : Koc: 17.94

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

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IATA-DGR

UN/ID No. : UN 1036
Proper shipping name : Ethylamine
Class : 2.1
Packing group : Not assigned by regulation
Labels : Flammable Gas
Packing instruction (cargo aircraft) : 200
Packing instruction (passenger aircraft) : Not permitted for transport

IMDG-Code

UN number : UN 1036
Proper shipping name : ETHYLAMINE

Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U
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

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

Safety, health and environmental regulations/legislation specific for the substance or mixture

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

Prohibition/Licensing Requirements : There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations.

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

DSL : All components of this product are on the Canadian DSL

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

SECTION 16. OTHER INFORMATION

Revision Date	:	21.03.2021
Date format	:	dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
AU OEL	:	Australia. Workplace Exposure Standards for Airborne Contaminants.
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
AU OEL / TWA	:	Exposure standard - time weighted average
AU OEL / STEL	:	Exposure standard - short term exposure limit

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; 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; 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; 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 Eco-

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conomic 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 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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