

**Safety data sheet as per COMMISSION REGULATION (EU) No 453/2010
of 20 May 2010 amending Regulation (EC) No 1907/2006
Product: Aminoethylethanolamine (AEEA)**



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Aminoethylethanolamine (AEEA)

CAS No.: 111-41-1

EC No.: 203-867-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: manufacture of substances

Uses identified against: no information available

1.3 Details of the supplier of the safety data sheet:

Manufacturer/Supplier:

Prasol Chemicals Ltd.,
Prasol House, Plot No.A-17/2/3,
T.T.C. Indl. Area, Khairne M.I.D.C.,
Navi Mumbai - 400 710
Maharashtra, India.
Tel: +91-22-27782555
Fax: +91-22-27782430

Further information obtainable from:

Mr. Dhaval Parikh

e-mail:sales@prasolchem.com; inquiry@prasolchem.com

Information in case of emergency:

Product safety department Tel: +91-22- 27782555; Fax:+91-22- 27782430

Other Comments (e.g. language(s) of the phone service): English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)



GHS05

Acute toxicity, Category 5, Oral H303 Harmful if swallowed



GHS07

Acute toxicity, Category 5, Dermal H313 Harmful in contact with skin

Skin corrosion/irritation, Sub-category 1B H314: Causes severe skin burns and eye damage.

Skin sensitisation, Sub-category 1B H317 May cause an allergic skin reaction.

Reproductive toxicity, Category 1B H360 May damage fertility or the unborn child

Effects on or via lactation H362 May cause harm to breast-fed children

Acute aquatic toxicity, Category 3 H402 Harmful to aquatic life.

2.1.2 Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn Harmful; Xi Irritant

Repr. Cat. 2; R61 May cause harm to the unborn child

Repr. Cat. 3; R62 Possible risk of impaired fertility

C; R34 Causes burns

R43 May cause sensitisation by skin contact

Information concerning particular hazards for human and environment: Not applicable

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



GHS05

Signal word **Danger**



GHS07



GHS08

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Hazard-determining components of labeling: Void

Hazard statements

H303 Harmful if swallowed
H313 Harmful in contact with skin
H314: Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child
H362 May cause harm to breast-fed children
H402 Harmful to aquatic life.

Precautionary statements

Prevention:

P201 Obtain special instructions before use.
P263 Avoid contact during pregnancy and while nursing.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
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 or doctor/ physician.
P308 + P313 IF exposed or concerned: Get medical advice/ attention..

2.3 Other hazards

Results of PBT and vPvB assessment: The substance is not PBT / vPvB

SECTION 3: Composition/information on ingredients

Chemical characterization:

CAS No.	Description
111-41-1	Aminoethylethanolamine (AEEA)
EC Number	: 203-867-5

Additional information:

Molecular Formula: C₄H₁₂N₂O **Molecular Weight:** 104.15g/mol

SECTION 4: First aid measures

4.1 General information: Consult a physician. Show this safety data sheet to the doctor in attendance.

After inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

After skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital.

After eye contact: Rinse thoroughly with plenty of water for at least 15 minutes. Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

After swallowing: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. May cause chemical burns in mouth and throat.

4.2 Most important symptoms and effects, both acute and delayed Refer Section 2

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information.

Information for doctor: Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Suitable extinguishing agents:

For small (incipient) fires, use media such as alcohol resistant foam, dry chemical, or carbon dioxide. For large fires, use water spray, fog or foam. Do not use water jet. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 Special hazards arising from the substance or mixture Carbon oxides, nitrogen oxides

5.3 Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Additional information Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment

See Section 13 for disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Take measures to prevent the buildup of electrostatic charge. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Information about fire - and explosion protection: Keep ignition sources away. Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Reacts with copper, aluminum, zinc and their alloys.

Information about storage in one common storage facility: Store away from incompatible materials.

Further information about storage conditions: Store away from moisture. Store in cool and dry place.

7.3 Specific end use(s) No further relevant information available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Contains no substances with occupational exposure limit values

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls Effective exhaust ventilation system

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protection of hands: Protective gloves, butyl rubber

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles with side shields

Body protection: Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance	: colorless liquid
Odour	: Amine like
Odour threshold	: not determined
pH	: 12 at 25% solution
Melting point/Melting range	: -38°C (pour point)
Initial Boiling point/Boiling range	: 243°C
Flash point	: 132°C (closed cup)
Evaporation rate	: not determined
Flammability (solid, gas)	: not applicable
Upper/lower flammability or explosive limits	: no data available
Danger of explosion	: Containers may explode in fire
Vapour pressure at 20°C	: 0.012 hPa
Vapour density	: 3.6
Relative density at 25°C	: 1.026
Solubility in / Miscibility with water	: miscible (1000g/L)
Partition coefficient (n-octanol/water) at 25°C: log Pow	: -1.46 (pH 10.6-11.0)
Auto-ignition temperature	: 368°C
Decomposition temperature	: not determined
Viscosity (dynamic)	: 141mPas
Explosive properties	: not explosive (structural reasons)
Oxidising properties	: not oxidizing (structural reasons)

9.2 Other information

pKa1= 6.83; pKa2= 9.82

SECTION 10: Stability and Reactivity

10.1 Reactivity No dangerous reactions known.

10.2 Chemical stability

Under storage at normal ambient temperatures (minus 40° C to + 40° C), the product is stable.

No hazardous reaction when handled and stored according to provisions.

10.3 Possibility of hazardous reactions No known hazardous reactions

10.4 Conditions to avoid Heat, flames and sparks.

10.5 Incompatible materials: Reacts with copper, aluminium, zinc and their alloys; Strong acids and oxidizing agents
Halogenated compounds

10.6 Hazardous decomposition products: carbon oxides, nitrogen oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50	oral	2150mg/kg bw/ day	rat
LD50	dermal	>2000 mg/kg	rabbit

Skin corrosion/irritation: causes burns

Serious eye damage/irritation: risk of serious damage to eye

Respiratory or skin sensitization: sensitizer Category 1B

Germ cell mutagenicity: weakly mutagenic

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

Reproductive toxicity: May cause harm to the unborn child, May cause harm to breast-fed children.

STOT-single exposure: Inhalation - May cause respiratory irritation. - Lungs

STOT-repeated exposure: NOAEL 1000 mg/kg bw/ day (dermal)

Aspiration hazard: no data available

Additional information: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

LC50	96h	640mg/l	Pimephales promelas
EC50	48h	22.0mg/L	Daphnia magna, water flea
EC50	72h	358mg/L	Desmodesmus subspicatus, blue green algae
EC50	30min	>1003mg/l	activated sludge

12.2 Persistence and degradability

Biodegradation readily biodegradable (>60% in 28 days)

12.3 Bio accumulative potential. low potential for bioaccumulation BCF 2.1 to <3.7

12.4 Mobility in soil The product is miscible in water and readily biodegradable in both water and soil.

Accumulation is not expected. Groundwater contamination is unlikely

12.5 Results of PBT and vPvB assessment not PBT / vPvB due to Low persistence and low bioaccumulation

12.6 Other adverse effects No further relevant information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

Land Transport (ADR/RID) Marine Transport (IMDG) Air Transport (ICAO/ IATA)

14.1 UN/ID Number: 2735

14.2 UN proper shipping name: Amines, liquid, corrosive, n.o.s. (Aminoethylethanolamine)

14.3 Transport hazard class: 8

14.4 Packaging group: II

14.5 Environmental hazards: not a marine pollutant

14.6 Special precautions for the user:

Danger code (Kemler) : 8

EMS Number : F-A, S-B

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: no data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006

Hazard pictograms Please refer section 2

Signal word Danger

Labeling according to EU guidelines:

Code letter and hazard designation of product: Please refer section 2

Risk phrases: Please refer section 2

15.2 Chemical safety assessment A Chemical Safety Assessment has not been carried out and will be applicable at the time of REACH Registration.

Substances of very high concern (SVHC) according to REACH, Article 57 The substance is not listed as SVHC.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any

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specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:

Product safety department.

Contact:

Tel: +91-22- 27782555

Fax: +91-22- 27782430

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EC: European Inventory of Existing Commercial Chemical Substances

EC50: concentration which gives half-maximal response

EMS: Emergency Schedule

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Code for Dangerous Goods

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

NOEC: No Observed Effect Level

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

Sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

ECHA: <http://echa.europa.eu/substance-information/-/substanceinfo/100.003.516>

Aldrich SDS:

<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=127582&brand=ALDRICH&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2F127582%3Flang%3Den>

Data compared to the previous version altered.

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- Section 3: Composition and Information on Ingredients
- Section 4: First Aid Measures
- Section 5: Fire and Explosion Data
- Section 6: Accidental Release Measures
- Section 7: Handling and Storage
- Section 8: Exposure Controls/Personal Protection
- Section 9: Physical and Chemical Properties
- Section 10: Stability and Reactivity Data
- Section 11: Toxicological Information
- Section 12: Ecological Information
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