

Triethanolamine 85%

Page 1 Issued: 26/10/2020 Revision No: 2

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: TRIETHANOLAMINE STANDARD

Synonyms; trade names: TEA STD,TELA STD,2,2,2 NITRILOTRIETHANOL,TEA 85%,TRIETHANOLAMINE

STANDARD 85%, TRIETHANOLAMINE 85%, TRIETHANOLAMINE STANDARD TEA85),

TRIETHANOLAMINE 85% LFG 85.

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

Identified uses: Chemical.

Company name: Nexchem Ltd

Unit 3 Barshaw Park

Leicester LE4 1ET

Tel: 0116 2311130

24/7 Emergency Tel: 0800 246 1274

Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC/1272/2008):

Physical hazards: Not Classified.

Health hazards: Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT RE 2 - H373

Environmental hazards: Not Classified.

Classification (67/548/EEC or 1999/45/EC): Xn;R48/22. Xi;R41.

Label elements:

Pictogram:



Signal word: Danger.

Triethanolamine 85%

Issued: 26/10/2020 Page 2

Hazard statements: H315 Causes skin irritation.

H318 Causes serious eye damage.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements: P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe vapour/ spray.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/ container in accordance with national regulations.

Contains: DIETHANOLAMINE.

Other hazards: This product does not contain any substances classified as PBT or vPvB.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures:

TRIETHANOLAMINE 60-100%

CAS number: 102-71-6 **EC number:** 203-049-8

REACH registration number: 01-2119486482-31-XXXX

Classification: Not Classified.

DIETHANOLAMINE 10-30%

CAS number: 111-42-2 **EC number:** 203-868-0

REACH registration number: 01-2119488930-28-XXXX **Classification:** Acute Tox. 4 - H302

Skin Irrit. 2 - H315

Eye Dam. 1 - H318

Repr. 2 - H361fd

STOT RE 2 - H373

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments: The data shown are in accordance with the latest EC Directives.

4. FIRST AID MEASURES

Description of first aid measures:

Inhalation: Move affected person to fresh air at once.

Ingestion: Move affected person to fresh air and keep warm and at rest in a position comfortable for

breathing. Promptly get affected person to drink large volumes of water to dilute the swallowed

chemical.

[cont...]

Triethanolamine 85%

Issued: 26/10/2020 Page 3

Skin contact: Remove contaminated clothing and rinse skin thoroughly with water.

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide

apart. Continue to rinse for at least 15 minutes.

Most important symptoms and effects, both acute and delayed:

Ingestion:May cause stomach pain or vomiting.Eye contact:Severe irritation, burning and tearing.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor: No specific recommendations. If in doubt, get medical attention promptly.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. **Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture:

Specific hazards: Oxides of the following substances: Carbon. Nitrogen.

Advice for firefighters:

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and

appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental precautions: Spillages or uncontrolled discharges into watercourses must be reported immediately to the

Environmental Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up:

Methods for cleaning up: Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with

plenty of water. Collect and place in suitable waste disposal containers and seal securely. For

waste disposal, see Section 13.

Reference to other sections: Wear protective clothing as described in Section 8 of this safety data sheet.

7. HANDLING AND STORAGE

Precautions for safe handling:

Usage precautions: Avoid contact with skin and eyes. Mechanical ventilation or local exhaust ventilation may be

required.

Triethanolamine 85%

Issued: 26/10/2020 Page 4

Conditions for safe storage, including any incompatibilities:

Storage precautions: Store in tightly closed, original container in a well-ventilated place.

Specific end use(s): The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Ingredient comments: WEL = Workplace Exposure Limits

TRIETHANOLAMINE (CAS: 102-71-6)

Ingredient comments: No exposure limits known for ingredient(s).

DNEL: Workers - Dermal; Long term systemic effects: 6.3 mg/kg

Workers - Inhalation; Long term systemic effects: 5 mg/m³
Workers - Inhalation; Long term local effects: 5 mg/m³
Consumer - Oral; Long term systemic effects: 13 mg/kg
Consumer - Dermal; Long term systemic effects: 3.1 mg/kg
Consumer - Inhalation; Long term systemic effects: 1.25 mg/m³

Consumer - Inhalation; Long term local effects: 1.25 mg/m³

PNEC: Fresh water; 0.32 mg/l

Intermittent release; 5.12 mg/l Sediment (Freshwater); 1.7 mg/kg

Marine water; 0.032 mg/l

Sediment (Marine water); 0.17 mg/kg

STP; 10 mg/l Soil; 0.151 mg/kg

DIETHANOLAMINE (CAS: 111-42-2)

DNEL: Industry - Inhalation; Long term systemic effects: 1 mg/m³

Industry - Dermal; Long term systemic effects: 0.13 mg/kg/day

Consumer - Inhalation; Long term systemic effects: 0.25 mg/m³

Consumer - Oral; Long term systemic effects: 0.06 mg/kg/day

Consumer - Dermal; Long term systemic effects: 0.07 mg/kg/day

PNEC: Fresh water; 0.0022 mg/l

Marine water; 0.00022 mg/l Intermittent release; 0.022 mg/l Sediment (Freshwater); 0.019 mg/kg Sediment (Marine water); 0.0019

Soil; 0.00108 mg/kg

STP; 100 mg/l

Triethanolamine 85%

Issued: 26/10/2020 Page 5

Exposure controls: Protective equipment:







Eye/face protection: The following protection should be worn: Chemical splash goggles or face shield. Personal

protective equipment for eye and face protection should comply with European Standard

EN166.

Hand protection: The most suitable glove should be chosen in consultation with the glove supplier/manufacturer,

who can provide information about the breakthrough time of the glove material. It is

recommended that gloves are made of the following material: Polyvinyl chloride (PVC). To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection: Wear rubber apron. Wear rubber footwear.

Respiratory protection: If ventilation is inadequate, suitable respiratory protection must be worn.

EN 136/140/141/145/143/149.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Liquid.

Colour: Colourless.

Odour: Ammonia.

Odour threshold: No information available. pH: No information available.

Melting point: 15.8°C

Initial boiling point and range: No information available.

Flash point: 190.5°C COC (Cleveland open cup).

Evaporation rate:No information available.Evaporation factor:No information available.Flammability (solid, gas):No information available.

Upper/lower flammability or explosive limits: No information available.

Other flammability: No information available.

Vapour pressure: No information available.

Vapour density: No information available.

Relative density: 1.126 @ 20°C

Explosive properties:

Bulk density:

Solubility(ies):

Miscible with water.

Partition coefficient:

Auto-ignition temperature:

Decomposition Temperature:

No information available.

No information available.

No information available.

No information available.

Explosive under the influence of a flame: No information available.

No information available.

Oxidising properties: No information available.

[cont...]

Triethanolamine 85%

Issued: 26/10/2020 Page 6

Other information:

Other information: Not determined.

Refractive index:

Particle size:

Molecular weight:

Volatility:

Saturation concentration:

Critical temperature:

No information available.

10. STABILITY AND REACTIVITY

Reactivity: There are no known reactivity hazards associated with this product.

Chemical stability:

Stability: Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions: Not determined.

Conditions to avoid: Avoid excessive heat for prolonged periods of time.

Incompatible materials:

Materials to avoid: Strong acids. Strong oxidising agents. Strong alkalis. Aldehydes. Ketones.

Hazardous decomposition products: Oxides of the following substances: Carbon. Nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity - oral:

ATE oral (mg/kg): 10,666.67

Skin corrosion/irritation:

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation:

Serious eye damage/irritation: Causes serious eye damage.

Respiratory sensitisation:

Respiratory sensitisation: No information available.

Skin sensitisation:

Skin sensitisation: No information available.

Germ cell mutagenicity:

Genotoxicity - in vitro: No information available. [cont...]

Triethanolamine 85%

Issued: 26/10/2020 Page 7

Carcinogenicity:

Carcinogenicity: No information available.

Reproductive toxicity:

Reproductive toxicity - fertility: Suspected of damaging fertility.

Reproductive toxicity – development: Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure:

STOT - single exposure: No information available.

Specific target organ toxicity - repeated exposure:

STOT - repeated exposure: Causes damage to organs (Blood, Kidneys, Liver) through prolonged or repeated exposure if

swallowed.

Target organs: Blood Liver Kidneys

Aspiration hazard:

Aspiration hazard: No information available.

Inhalation: May cause respiratory system irritation.

Ingestion: Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal

tract. Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Skin contact: Irritating to skin.

Eye contact: Risk of serious damage to eyes.

Toxicological information on ingredients:

TRIETHANOLAMINE:
Acute toxicity – oral:

Acute toxicity oral (LD₅₀ mg/kg): 6,400.0 Species: Rat

ATE oral (mg/kg): 6,400.0

Acute toxicity - dermal:

Notes (dermal LD₅₀): LD₅₀ >2000 mg/kg, Dermal, Rat

Skin corrosion/irritation:

Skin corrosion/irritation: Not irritating.

Animal data: No information available.

Serious eye damage/irritation:

Serious eye damage/irritation: No information available.

Respiratory sensitisation:

Respiratory sensitisation: No information available.

Triethanolamine 85%

Issued: 26/10/2020 Page 8

Skin sensitisation:

Skin sensitisation: No information available.

Germ cell mutagenicity:

Genotoxicity - in vitro: No information available.

Genotoxicity - in vivo: Negative.

Carcinogenicity:

Carcinogenicity: Data lacking.

IARC carcinogenicity: IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity:

Reproductive toxicity - fertility: No information available.

Reproductive toxicity - development: Data lacking.

Specific target organ toxicity - single exposure:

STOT - single exposure: No information available.

Specific target organ toxicity - repeated exposure:

STOT - repeated exposure: No information available.

Aspiration hazard:

Aspiration hazard: No information available.

Inhalation: May cause respiratory irritation.

Ingestion: Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal

tract.

Skin contact: May be slightly irritating to skin.

Eye contact: May cause temporary eye irritation.

DIETHANOLAMINE:

Acute toxicity - oral:

Acute toxicity oral (LD₅₀ mg/kg): 1,600.0 Species: Rat

Notes (oral LD₅₀): OECD 401 **ATE oral (mg/kg):** 1,600.0

Acute toxicity - dermal:

Acute toxicity dermal (LD₅₀ mg/kg): 12,970.0 Species: Rabbit

Acute toxicity - inhalation:

Notes (inhalation LC₅₀): LC₀ 3.35 mg/l, Inhalation, Rat

Skin corrosion/irritation:

Skin corrosion/irritation: Causes skin irritation. Rabbit [cont...]

Triethanolamine 85%

Issued: 26/10/2020 Page 9

Serious eye damage/irritation:

Serious eye damage/irritation: Causes serious eye damage. Irreversible effect. Rabbit

Respiratory sensitisation:

Respiratory sensitisation: No information available.

Skin sensitisation:

Skin sensitisation: Not sensitising.

Germ cell mutagenicity:

Genotoxicity - in vitro: This substance has no evidence of mutagenic properties.

Carcinogenicity:

Carcinogenicity: Based on available data the classification criteria are not met. NOAEL 32 mg/kg/day, Dermal,

Rat 103 weeks LOAEL 40 mg/kg/day, Dermal, Rat.

IARC carcinogenicity: IARC Group 2B Possibly carcinogenic to humans.

Reproductive toxicity:

Reproductive toxicity – fertility: Suspected of damaging the unborn child. **Reproductive toxicity – development:** Suspected of damaging fertility.

Specific target organ toxicity - single exposure:

STOT - single exposure: No information available.

Specific target organ toxicity - repeated exposure:

STOT - repeated exposure: Causes damage to organs (Blood, Kidneys, Liver) through prolonged or repeated exposure if

swallowed.

Target organs: Blood Kidneys Liver

Aspiration hazard:

Aspiration hazard: Based on available data the classification criteria are not met.

Inhalation: Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion: Harmful if swallowed.

Skin contact: Irritating to skin.

Eye contact: Risk of serious damage to eyes. Risk of corneal damage.

12. ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous. However, large or

frequent spills may have hazardous effects on the environment.

Ecological information on ingredients:

TRIETHANOLAMINE:

Ecotoxicity: The product components are not classified as environmentally hazardous. However, large or

frequent spills may have hazardous effects on the environment.

[cont...]

Triethanolamine 85%

Issued: 26/10/2020 Page 10

DIETHANOLAMINE:

Ecotoxicity: The product components are not classified as environmentally hazardous.

However, this does not exclude the possibility that large or frequent spills can have a harmful

or damaging effect on the environment.

Toxicity:

Toxicity: Not considered toxic to fish. **Acute toxicity – fish:** LC₅₀, 96 hours: 5600 mg/l, Fish

Acute toxicity - aquatic invertebrates: EC₅₀, 48 hours: 947 mg/l, Daphnia magna

Acute toxicity - aquatic plants: IC₅₀, 72 hours: >5000 mg/l, Algae

Ecological information on ingredients:

TRIETHANOLAMINE:

Toxicity: Not considered toxic to fish.

Acute toxicity – fish: LC₅₀, 96 hours: 450-7900 mg/l, Fish

Acute toxicity - aquatic invertebrates: EC₅₀, 48 hours: >2500 mg/l, Daphnia magna

Acute toxicity - aquatic plants: IC₅₀, 72 hours: 216 mg/l, Algae

DIETHANOLAMINE:

Toxicity: Not considered toxic to fish.

Acute aquatic toxicity:

Acute toxicity – fish: LC₅₀, 96 hours: 1460 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity – aquatic invertebrates: EC_{50} , 48 hours: 55 mg/l, Daphnia magna

NOEC, 504 hour: 0.78 mg/l, Daphnia magna LOEC, 504 hour: 1.56 mg/l, Daphnia magna

Acute toxicity – aquatic plants: EC₅₀, 72 hours: 9.5 mg/l, Pseudokirchneriella subcapitata

Acute toxicity - microorganisms: EC₂₀, 30 minutes: >1000 mg/l, Activated sludge

Chronic aquatic toxicity:

Chronic toxicity - aquatic invertebrates: EC10, 21 days: 1.05 mg/l, Daphnia magna

OECD 202

Persistence and degradability:

Persistence and degradability: There are no data on the degradability of this product.

Ecological information on ingredients:

TRIETHANOLAMINE:

Persistence and degradability: There are no data on the degradability of this product.

Biodegradation: Degradation 97: 28 days

OECD 301A

Triethanolamine 85%

Issued: 26/10/2020 Page 11

DIETHANOLAMINE:

Persistence and degradability: The product is readily biodegradable.

Biodegradation: Degradation 93%: 28 day

OECD 301F

Biological oxygen demand: 885 mg/g **Chemical oxygen demand:** 1352 mg/g

Bioaccumulative potential:

Bioaccumulative potential: No data available on bioaccumulation.

Partition coefficient: No information available.

TRIETHANOLAMINE:

Bioaccumulative potential: BCF: < 0.4, Cyprinus carpio (Common carp) OECD 305 C

Partition coefficient: log Pow: -2.3

DIETHANOLAMINE:

Bioaccumulative potential: The product does not contain any substances expected to be bioaccumulating.

Partition coefficient: log Kow: -2.18

Mobility in soil:

Mobility: The product is soluble in water.

TRIETHANOLAMINE:

Mobility: The product is soluble in water.

Surface tension: 48.8 mN/m @ 25°C

DIETHANOLAMINE:

Mobility: The product is soluble in water.

Henry's law constant: 0.000004 Pa m³/mol @ 25°C

Results of PBT and vPvB assessment:

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

TRIETHANOLAMINE:

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

DIETHANOLAMINE:

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects:

Cod: 1.52 mg

Other adverse effects: No information required.

Triethanolamine 85%

Issued: 26/10/2020 Page 12

TRIETHANOLAMINE:

Cod: 0.25

Other adverse effects: Not determined.

DIETHANOLAMINE:

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

General information: When handling waste, the safety precautions applying to handling of the product should be

considered. Do not puncture or incinerate, even when empty.

Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the

local Waste Disposal Authority.

14. TRANSPORT INFORMATION

General: The product is not covered by international regulations on the transport of dangerous goods

(IMDG, IATA, ADR/RID).

UN number:

UN proper shipping name:

Transport hazard class(es):

Packing group:

No information required.

No information required.

No information required.

Environmental hazards:

Environmentally hazardous substance/marine pollutant: No.

Special precautions for user: No information required.

Transport in bulk according to Annex II of MARPOL and the IBC Code:

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No information required.

15. REGULATORY INFORMATION

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Chemical safety assessment: No chemical safety assessment has been carried out.

Triethanolamine 85%

Issued: 26/10/2020 Page 13

Note:

The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet:

ATE: Acute Toxicity Estimate.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by

Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways.

CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

Kow: Octanol-water partition coefficient.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation

(EC) No 1907/2006.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

vPvB: Very Persistent and Very Bioaccumulative.

IARC: International Agency for Research on Cancer.

MARPOL 73/78: International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.

cATpE: Converted Acute Toxicity Point Estimate.

BCF: Bioconcentration Factor.

BOD: Biochemical Oxygen Demand.

EC₅₀: 50% of maximal Effective Concentration.

LOAEC: Lowest Observed Adverse Effect Concentration.

LOAEL: Lowest Observed Adverse Effect Level.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No Observed Adverse Effect Level. NOEC: No Observed Effect Concentration.

LOEC: Lowest Observed Effect Concentration.

DMEL: Derived Minimal Effect Level.

EL50: Exposure Limit 50

hPa: Hectopascal

LL50: Lethal Loading fifty

OECD: Organisation for Economic Co-operation and Development

Triethanolamine 85%

Issued: 26/10/2020 Page 14

POW: Octanol-water partition coefficient SCBA: self-contained breathing apparatus

STP: Sewage Treatment Plant VOC: Volatile Organic Compounds

Classification abbreviations and acronyms:

Acute Tox. = Acute toxicity

Aquatic Acute = Hazardous to the aquatic environment (acute)

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Hazard statements in full: H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs (Blood, Kidneys, Liver, Nervous system) through

prolonged or repeated exposure.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not

replace the user's own assessment of risks as required by other health and safety legislation.

This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.