Safety Data Sheet
Ethylamine
SDS reference: 00054_LIQ

Danger

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

1.1. Product identifier

Trade name : Ethylamine
SDS no : 00054_LIQ
Other means of identification : ethylamine
CAS-No. : 75-04-7
EC-No. : 200-834-7
EC Index-No. : 612-002-00-4
REACH registration No : 01-2119485800-36
Chemical formula : C_2H_7N

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

Relevant identified uses : Industrial use. Perform risk assessment prior to use.
Test gas/Calibration gas.
Chemical reaction / Synthesis.
Laboratory use.
Uses advised against : Consumer use.
Uses other than those listed above are not supported, contact your supplier for more information on other uses.

1.3. Details of the supplier of the safety data sheet

SIAD S.p.A.
Via San Bernardino, 92
I-24126 Bergamo – Italia
T +39 035 328111 - F +39 035 315486
siad_reach_clp@siad.com - www.siad.com

1.4. Emergency telephone number

Emergency telephone number : Linea verde S.E.T. - from Italy 800452661 - International +39 0362512868 - 24 hours a day, 365 days a year

Country	Organisation/Company	Address	Emergency number	Comment
Italy	Centro Antiveleni di Bergamo Azienda Ospedaliera Papa Giovanni XXII	Piazza OMS - Organizzazione Mondiale della Sanità, 1 24127	800 88 33 00	
Italy	Centro Antiveleni di Milano Ospedale Niguarda Ca' Granda	Piazza Ospedale Maggiore 3 20162	+39 02 6610 1029	
Italy	Centro Antiveleni di Roma CAV Policlinico "A. Gemelli", Dipartimento di Tossicologia Clinica Universita Cattolica del Sacro Cuore	Largo Agostino Gemelli, 8 00168	+39 06 305 4343	
Italy	Centro Antiveleni di Roma CAV Policlinico "Umberto I", Università di Roma	Viale del Policlinico, 155 00161	+39 06 4997 8000	

Italy	Centro Antiveleni di Firenze Az. Osp. "Careggi" U.O. Tossicologia Medica, S.O.D. di Tossicologia Clinicaicologia Clinica	Largo Brambilla, 3 50134	+39 055 794 7819
Italy	Centro Antiveleni di Pavia CAV Centro Nazionale di Informazione Tossicologica, IRCCS Fondazione Maugeri	Via Salvatore Maugeri, 10 27100	+39 03 822 4444
Italy	Centro Antiveleni di Roma CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA	Piazza Sant'Onofrio, 4 00165	+39 06 6859 3726
Italy	Centro Antiveleni di Foggia Az. Osp. Univ. Foggia	V.le Luigi Pinto, 1 71122	+39 800 183 459
Italy	Centro Antiveleni di Napoli Az. Osp. "A. Cardarelli"	Via A. Cardarelli, 9 80131	+39 081 54 53 333
Italy	Centro Antiveleni di Verona Azienda Ospedaliera Integrata Verona	Piazzale Aristide Stefani, 1 37126	+39 800 011 858

SECTION 2: hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical hazards	Flammable gases, Category 1A	H220
	Gases under pressure : Liquefied gas	H280
Health hazards	Serious eye damage/eye irritation, Category 2	H319
	Acute toxicity (inhalation:gas) Category 4	H332
	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS04 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.

Precautionary statements (CLP)

- Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 - Do not breathe gas/vapours.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.

- Response : P304+P340+P315 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get immediate medical advice / attention.
P305+P351+P338+P315 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice / attention.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
- Storage : P403 - Store in a well-ventilated place.

2.3. Other hazards

Not classified as PBT or vPvB.
The substance/mixture has no endocrine disrupting properties.

SECTION 3: composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethylamine	CAS-No.: 75-04-7 EC-No.: 200-834-7 EC Index-No.: 612-002-00-4 REACH registration No: 01-2119485800-36	100	Flam. Gas 1A, H220 Press. Gas (Liq.), H280 Eye Irrit. 2, H319 Acute Tox. 4 (Inhalation:gas), H332 STOT SE 3, H335

Contains no other components or impurities which will influence the classification of the product.

3.2. Mixtures Not applicable

SECTION 4: first aid measures

4.1. Description of first aid measures

- Inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.
- Skin contact : Adverse effects not expected from this product.
- Eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes.
- Ingestion : Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

May cause irritation to cornea (with temporary disturbance to vision).
May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
See section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray or fog.
  Dry powder.
  Carbon dioxide.
  Shutting off the source of the gas is the preferred method of control.
  Be aware of the risk of formation of static electricity with the use of CO2 extinguishers. Do not use them in places where a flammable atmosphere may be present.
- Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products : Carbon monoxide. Nitric oxide/nitrogen dioxide.

5.3. Advice for firefighters

Specific methods : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems.
If possible, stop flow of product.
Use water spray or fog to knock down fire fumes if possible.
Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.
Move containers away from the fire area if this can be done without risk.

Special protective equipment for fire fighters : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus.
Standard EN 943-2: Protective clothing against liquid and gaseous chemicals, aerosols and solid particles. Gas-tight chemical protective suits for emergency teams.
Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

SECTION 6: accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Act in accordance with local emergency plan.
Try to stop release.
Evacuate area.
Eliminate ignition sources.
Ensure adequate air ventilation.
Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Stay upwind.
See section 8 of the SDS for more information on personal protective equipment

For emergency responders : Monitor concentration of released product.
Consider the risk of potentially explosive atmospheres.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
See section 5.3 of the SDS for more information.

6.2. Environmental precautions

Try to stop release.
Reduce vapour with fog or fine water spray.

6.3. Methods and material for containment and cleaning up

Ventilate area.

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: handling and storage

7.1. Precautions for safe handling

Safe use of the product : The product must be handled in accordance with good industrial hygiene and safety procedures.
Only experienced and properly instructed persons should handle gases under pressure.
Consider pressure relief device(s) in gas installations.
Ensure the complete gas system was (or is regularily) checked for leaks before use.
Do not smoke while handling product.
Avoid exposure, obtain special instructions before use.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Avoid suck back of water, acid and alkalis.
Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.
Purge air from system before introducing gas.
Take precautionary measures against static discharge.
Keep away from ignition sources (including static discharges).
Consider the use of only non-sparking tools.
Do not breathe gas.
Avoid release of product into work area.
Ensure equipment is adequately earthed.

Safe handling of the gas receptacle : Refer to supplier's container handling instructions.
Do not allow backfeed into the container.
Protect containers from physical damage; do not drag, roll, slide or drop.
When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.
Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.
If user experiences any difficulty operating valve discontinue use and contact supplier.
Never attempt to repair or modify container valves or safety relief devices.
Damaged valves should be reported immediately to the supplier.
Keep container valve outlets clean and free from contaminants particularly oil and water.
Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.
Close container valve after each use and when empty, even if still connected to equipment.
Never attempt to transfer gases from one cylinder/container to another.
Never use direct flame or electrical heating devices to raise the pressure of a container.
Do not remove or deface labels provided by the supplier for the identification of the content of the container.
Suck back of water into the container must be prevented.
Open valve slowly to avoid pressure shock.

7.2. Conditions for safe storage, including any incompatibilities

Observe all regulations and local requirements regarding storage of containers.
Containers should not be stored in conditions likely to encourage corrosion.
Container valve guards or caps should be in place.
Containers should be stored in the vertical position and properly secured to prevent them from falling over.
Stored containers should be periodically checked for general condition and leakage.
Keep container below 50°C in a well ventilated place.
Store containers in location free from fire risk and away from sources of heat and ignition.
Keep away from combustible materials.
Segregate from oxidant gases and other oxidants in store.
All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.

7.3. Specific end use(s)

None.

SECTION 8: exposure controls/personal protection

8.1. Control parameters

ethylamine (75-04-7)	
Albania - Occupational Exposure Limits	
Local name	Etilaminë
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES “PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË”
Austria - Occupational Exposure Limits	
Local name	Ethylamin
MAK (mg/m³)	9.4 mg/m³
MAK (OEL TWA) [ppm]	5 ppm
MAK (OEL STEL)	18.8 mg/m³ (4x 15(Miw) min)
MAK (OEL STEL) [ppm]	10 ppm (4x 15(Miw) min)
Regulatory reference	BGBl. II Nr. 382/2020
Belgium - Occupational Exposure Limits	
Local name	Ethylamine # Ethylamine
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
OEL STEL	28.2 mg/m³
OEL STEL [ppm]	15 ppm
Remark	D: la mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air. # D: de vermelding “D” betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 19/11/2020

Bulgaria - Occupational Exposure Limits	
Local name	Етиламин
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр.5 от 17 Януари 2020 г.)
Croatia - Occupational Exposure Limits	
Local name	Etilamin
GVI (OEL TWA) [1]	9.4 mg/m³
GVI (OEL TWA) [2]	5 ppm
Remark	Direktiva: 2000/39/EZ
Regulatory reference	Pravilnik o izmjenama i dopunama Pravilnika o graničnim vrijednostima izloženosti opasnim tvarima pri radu i o biološkim graničnim vrijednostima (NN 91/2018)
Cyprus - Occupational Exposure Limits	
Local name	Αιθυλαμίνη
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	Ethylamin (Ethanamin)
PEL (OEL TWA)	9 mg/m³
PEL (OEL TWA) [ppm]	4.8 ppm
NPK-P (OEL C)	20 mg/m³
NPK-P (OEL C) [ppm]	10.7 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty), respektive kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 41/2020 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Ethylamin
OEL TWA [1]	9.4 mg/m³
OEL TWA [2]	5 ppm
Remark	E (betyder, at stoffet har en EF-grænseværdi); H (betyder, at stoffet kan optages gennem huden)
Regulatory reference	BEK nr 290 af 13/02/2021
Estonia - Occupational Exposure Limits	
Local name	Etüülamiin (aminoetaan)
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Remark	A (Naha kaudu kergesti imenduv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 17.10.2019, 2); Vabariigi Valitsuse 10. märtsi 2019. a määruse nr 84

Finland - Occupational Exposure Limits	
Local name	Etyyliamiini
HTP (OEL TWA) [1]	9.4 mg/m³
HTP (OEL TWA) [2]	5 ppm
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Ethylamine
VME (OEL TWA)	9.4 mg/m³
VME (OEL TWA) [ppm]	5 ppm
VLE (OEL C/STEL)	28.2 mg/m³
VLE (OEL C/STEL) [ppm]	15 ppm
Remark	Valeurs règlementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487; Décret n° 2020-1546; Décret n°2021-434)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethylamin
AGW (OEL TWA) [1]	9.4 mg/m³
AGW (OEL TWA) [2]	5 ppm
Peak exposure limitation factor	=2=(I)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich)
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	Ethylamine
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Αιθυλαμίνη
OEL TWA	18 mg/m³
OEL TWA [ppm]	10 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ETIL-AMIN
AK (OEL TWA)	9.4 mg/m³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármat); EU1 (2000/39/EK irányelvben közölt érték); N (Irritáló anyagok, egyszerű fojtógázok, csekély egészségkárosító hatással bíró anyagok)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről

Ireland - Occupational Exposure Limits	
Local name	Ethylamine
OEL TWA [1]	9.4 mg/m³
OEL TWA [2]	5 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2020
Italy - Occupational Exposure Limits	
Local name	Etilammina
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia - Occupational Exposure Limits	
Local name	Etilamīns
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Lithuania - Occupational Exposure Limits	
Local name	Etilaminas
IPRV (OEL TWA)	9.4 mg/m³
IPRV (OEL TWA) [ppm]	5 ppm
TPRV (OEL STEL)	13.8 mg/m³
TPRV (OEL STEL) [ppm]	7.5 ppm
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Éthylamine
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	Mémorial A Nº 684 de 2018 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Ethylamine
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.57 of 2018)
Netherlands - Occupational Exposure Limits	
Local name	Ethylamine
TGG-8u (OEL TWA)	9 mg/m³
Regulatory reference	Arbeidsomstandighedenregeling 2021
Poland - Occupational Exposure Limits	
Local name	Etyloamina
NDS (OEL TWA)	9.4 mg/m³

NDSCh (OEL STEL)	18 mg/m³
Remark	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Etilamina
OEL TWA [ppm]	5 ppm
OEL STEL [ppm]	15 ppm
Remark	P (Toxicidade percutânea)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Etilamină
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Serbia - Occupational Exposure Limits	
Local name	етиламин
OEL TWA	9 mg/m³
OEL TWA [ppm]	5 ppm
Remark	EU* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа)
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама (,,Службени гласник РС”, бр. 106/09 и 117/17)
Slovakia - Occupational Exposure Limits	
Local name	Etylamín (etánamín)
NPHV (OEL TWA) [1]	9.4 mg/m³
NPHV (OEL TWA) [2]	5 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	etilamin
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
OEL STEL	18.8 mg/m³
OEL STEL [ppm]	10 ppm
Remark	EU
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	Etilamina
VLA-ED (OEL TWA) [1]	9 mg/m³
VLA-ED (OEL TWA) [2]	5 ppm

Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2021. INSHT
Sweden - Occupational Exposure Limits	
Local name	Etylamin
NGV (OEL TWA)	9.4 mg/m³
NGV (OEL TWA) [ppm]	5 ppm
KTV (OEL STEL)	18.8 mg/m³
KTV (OEL STEL) [ppm]	10 ppm
Remark	V (Vägledande korttidsgränsvärde ska användas som ett rekommenderat högsta värde som inte bör överskridas)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Ethylamine
WEL TWA (OEL TWA) [1]	3.8 mg/m³
WEL TWA (OEL TWA) [2]	2 ppm
WEL STEL (OEL STEL)	11 mg/m³
WEL STEL (OEL STEL) [ppm]	6 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Etýlamín
OEL TWA	9.2 mg/m³
OEL TWA [ppm]	5 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Etylamin
Grenseverdi (OEL TWA) [1]	4 mg/m³
Grenseverdi (OEL TWA) [2]	2 ppm
Remark	E: EU har en veiledende grenseverdi for stoffet.
Regulatory reference	FOR-2020-04-06-695
North Macedonia - Occupational Exposure Limits	
Local name	етиламин
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Remark	(EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанци („Службен весник на Република Македонија” бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Ethylamine / Ethylamin

MAK (OEL TWA) [1]	9 mg/m³
MAK (OEL TWA) [2]	5 ppm
KZGW (OEL STEL)	18 mg/m³
KZGW (OEL STEL) [ppm]	10 ppm
Critical toxicity	VRS, Peau, Yeux / OAW, Haut, Auge
Remark	NIOSH, OSHA
Regulatory reference	www.suva.ch, 01.01.2021
Turkey - Occupational Exposure Limits	
Local name	Etilamin
OEL TWA	9.4 mg/m³
OEL TWA [ppm]	5 ppm
Regulatory reference	12 Ağustos 2013 Tarihli ve 28733 Sayılı Resmî Gazete

ethylamine (75-04-7)	
DNEL: Derived no effect level (Workers)	
Acute - local effects, inhalation	18 mg/m³
Long-term - local effects, inhalation	9 mg/m³

ethylamine (75-04-7)	
PNEC: Predicted no effect concentration	
Aqua (freshwater)	0.046 mg/l
Aqua (marine water)	0.0046 mg/l
Aquatic, intermittent releases	0.023 mg/l
Sediment, freshwater	0.304 mg/kg dwt
Sediment,marine water	0.0304 mg/kg dwt
Soil, agricultural	0.0336 mg/kg dwt
Micro-organisms in sewage treatment plant (STP)	10.5 mg/l

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation.
Product to be handled in a closed system.
Systems under pressure should be regularly checked for leakages.
Ensure exposure is below occupational exposure limits (where available).
Gas detectors should be used when toxic gases may be released.
Consider the use of a work permit system e.g. for maintenance activities.

8.2.2. Individual protection measures, e.g. personal protective equipment

A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk.
The following recommendations should be considered:
PPE compliant to the recommended EN/ISO standards should be selected.

• Eye/face protection : Wear goggles and a face shield when transfilling or breaking transfer connections.
Standard EN 166 - Personal eye-protection - specifications.
Provide readily accessible eye wash stations and safety showers.

• Skin protection
- Hand protection : Wear working gloves when handling gas containers.
Standard EN 388 - Protective gloves against mechanical risk, performance level 1 or higher.

- Other	:	Consider the use of flame resistant anti-static safety clothing. Standard EN ISO 14116 - Limited flame spread materials. Standard EN 1149-5 - Protective clothing: Electrostatic properties. Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.
• Respiratory protection	:	Gas filters may be used if all surrounding conditions e.g. type and concentration of the contaminant(s) and duration of use are known. Use gas filters with full face mask, where exposure limits may be exceeded for a short-term period, e.g. connecting or disconnecting containers. Recommended: Filter K (green). Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Gas filters do not protect against oxygen deficiency. Standard EN 14387 - Gas filter(s), combined filter(s) and standard EN136, full face masks . Keep self contained breathing apparatus readily available for emergency use. Self contained breathing apparatus is recommended, where unknown exposure may be expected, e.g. during maintenance activities on installation systems.
• Thermal hazards	:	None in addition to the above sections.

8.2.3. Environmental exposure controls

Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

SECTION 9: physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance		
- Physical state at 20°C / 101.3kPa	:	Gas
- Colour	:	Colourless.
Odour	:	Ammoniacal. Rotten fish. Odour can persist. Ethereal. Odour threshold is subjective and inadequate to warn of overexposure.
pH	:	Not applicable for gases and gas mixtures.
Melting point / Freezing point	:	-81 °C
Boiling point	:	16.6 °C
Flash point	:	Not applicable for gases and gas mixtures.
Flammability	:	Extremely flammable gas.
Explosive limits	:	3.5 – 14 vol %
Lower explosion limit	:	3.5 vol %
Upper explosion limit	:	14 vol %
Vapour pressure [20°C]	:	1.2 bar(a)
Vapour pressure [50°C]	:	33 bar(a)
Density and/or relative density	:	Not applicable for gases and gas mixtures.
Relative vapour density (air=1)	:	1.7
Water solubility	:	Completely soluble.
Partition coefficient n-octanol/water (Log Kow)	:	-0.13
Auto-ignition temperature	:	385 °C
Decomposition temperature	:	Not applicable.
Viscosity, kinematic	:	Not applicable for gases and gas mixtures.
Particle characteristics	:	Not applicable for gases and gas mixtures. Nanoforms are not relevant for gases and gas mixtures

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Oxidising properties	:	No oxidising properties.
Tci	:	5.7 %
Critical temperature [°C]	:	183 °C

9.2.2. Other safety characteristics

Molar mass	:	45 g/mol
Other data	:	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10: stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Can form explosive mixture with air.
May react violently with oxidants.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Avoid moisture in installation systems.

10.5. Incompatible materials

May react violently with alkalis.
May react violently with acids.
Air, Oxidisers.
For additional information on compatibility refer to ISO 11114.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	:	Harmful if inhaled.
LC50 Inhalation - Rat [ppm]		8000 ppm/4h
Skin corrosion/irritation	:	No known effects from this product.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitisation	:	No known effects from this product.
Germ cell mutagenicity	:	No known effects from this product.
Carcinogenicity	:	No known effects from this product.
Toxic for reproduction : Fertility	:	No known effects from this product.
Toxic for reproduction : unborn child	:	No known effects from this product.
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	No known effects from this product.
Aspiration hazard	:	Not applicable for gases and gas mixtures.

11.2. Information on other hazards

Other information	:	The substance/mixture has no endocrine disrupting properties.

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Ethylamine
SDS reference: 00054_LIQ

SECTION 12: ecological information

12.1. Toxicity

Assessment	:	Classification criteria are not met.
EC50 48h - Daphnia magna [mg/l]	:	No data available.
EC50 72h - Algae [mg/l]	:	No data available.
LC50 96 h - Fish [mg/l]	:	240 mg/l

12.2. Persistence and degradability

Assessment	:	The substance is readily biodegradable. Unlikely to persist.

12.3. Bioaccumulative potential

Assessment	:	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). See section 9.

12.4. Mobility in soil

Assessment	:	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

12.5. Results of PBT and vPvB assessment

Assessment	:	Not classified as PBT or vPvB.

12.6. Endocrine disrupting properties

The substance/mixture has no endocrine disrupting properties.

12.7. Other adverse effects

Other adverse effects	:	No known effects from this product.
Effect on the ozone layer	:	No effect on the ozone layer.
Effect on global warming	:	No known effects from this product.

SECTION 13: disposal considerations

13.1. Waste treatment methods

Contact supplier if guidance is required.
Do not discharge into areas where there is a risk of forming an explosive mixture with air.
Waste gas should be flared through a suitable burner with flash back arrestor.
Must not be discharged to atmosphere.
Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere.
Gas may be scrubbed in sulphuric acid solution.
Ensure that the emission levels from local regulations or operating permits are not exceeded.
Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at http://www.eiga.eu for more guidance on suitable disposal methods.
Return unused product in original container to supplier.

List of hazardous waste codes (from Commission Decision 2000/532/EC as amended)	:	16 05 04 *: Gases in pressure containers (including halons) containing hazardous substances.

13.2. Additional information

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Safety Data Sheet
Ethylamine
SDS reference: 00054_LIQ

SECTION 14: transport information

14.1. UN number or ID number

In accordance with ADR / RID / IMDG / IATA / ADN

UN-No. : 1036

14.2. UN proper shipping name

Transport by road/rail (ADR/RID) : ETHYLAMINE

Transport by air (ICAO-TI / IATA-DGR) : Ethylamine

Transport by sea (IMDG) : ETHYLAMINE

14.3. Transport hazard class(es)

Labelling :

2.1 : Flammable gases.

Transport by road/rail (ADR/RID)

Class : 2

Classification code : 2F

Hazard identification number : 23

Tunnel Restriction : B/D - Tank carriage : Passage forbidden through tunnels of category B, C, D and E. Other carriage : Passage forbidden through tunnels of category D and E

Transport by air (ICAO-TI / IATA-DGR)

Class / Div. (Sub. risk(s)) : 2.1

Transport by sea (IMDG)

Class / Div. (Sub. risk(s)) : 2.1

Emergency Schedule (EmS) - Fire : F-D

Emergency Schedule (EmS) - Spillage : S-U

14.4. Packing group

Transport by road/rail (ADR/RID) : Not applicable

Transport by air (ICAO-TI / IATA-DGR) : Not applicable

Transport by sea (IMDG) : Not applicable

14.5. Environmental hazards

Transport by road/rail (ADR/RID) : None.

Transport by air (ICAO-TI / IATA-DGR) : None.

Transport by sea (IMDG) : None.

14.6. Special precautions for user

Packing Instruction(s)

Transport by road/rail (ADR/RID) : P200

Transport by air (ICAO-TI / IATA-DGR)

Passenger and Cargo Aircraft : Forbidden.

Cargo Aircraft only : 200.

Transport by sea (IMDG) : P200

Special transport precautions	:	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: regulatory information

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

EU-Regulations

Restrictions on use	:	None. Contains no substance(s) listed on the REACH Candidate List.
Other information, restriction and prohibition regulations	:	Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals). Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants).
Seveso Directive : 2012/18/EU (Seveso III)	:	Covered.

National regulations

Regulatory reference	:	Ensure all national/local regulations are observed.

15.2. Chemical safety assessment

A CSA has not yet been carried out.

SECTION 16: other information

Indication of changes	:	Safety data sheet in accordance with commission regulation (EU) No 2020/878.
Abbreviations and acronyms	:	ATE - Acute Toxicity Estimate CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 EINECS - European Inventory of Existing Commercial Chemical Substances CAS# - Chemical Abstract Service number PPE - Personal Protection Equipment LC50 - Lethal Concentration to 50 % of a test population RMM - Risk Management Measures PBT - Persistent, Bioaccumulative and Toxic vPvB - Very Persistent and Very Bioaccumulative STOT SE - Specific Target Organ Toxicity - Single Exposure CSA - Chemical Safety Assessment EN - European Standard UN - United Nations ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road IATA - International Air Transport Association IMDG code - International Maritime Dangerous Goods

		RID - Regulations concerning the International Carriage of Dangerous Goods by Rail STOT RE - Specific Target Organ Toxicity - Repeated Exposure UFI - Unique Formula Identifier
Training advice	:	Ensure operators understand the flammability hazard. Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard.
Further information	:	Classification in accordance with the procedures and calculation methods of Regulation (EC) 1272/2008 (CLP). Key literature references and sources of data are maintained in EIGA doc 169 : 'Classification and Labelling Guide', downloadable at http://www.Eiga.eu .

Full text of H- and EUH-statements

Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1A	Flammable gases, Category 1A
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

DISCLAIMER OF LIABILITY : Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.
Details given in this document are believed to be correct at the time of going to press.
Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

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