

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS Ref.: 325-280420-1 Issue date: 4/28/2020 Version: 2.0

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

#### 1.1. Product identifier

Product form : Substance

Substance name : TRIMETHYLAMINE (TMA)

Product code : 325-280420-1 Formula :  $C_3H_9N$ 

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Catalyst in proseses

In resins

Disinfecting agent Flotation agent Chlorine salts

#### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Ak-Kim Kimya Sanayi ve Tic. A.Ş. Merkez Mahallesi, Ak-Kim Sokak 7 77600

77600

T +90 226 815 33 00 - F +90 226 353 25 39

www.akkim.com.tr

#### 1.4. Emergency telephone number

Emergency number : +90 226 815 33 00/33112

Country	Organisation/Company	Address	Emergency number	Comment
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents via 114.

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

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

Flammable gases, Category 1

Acute toxicity (inhalation:gas) Category 4

Skin corrosion/irritation, Category 2

H315

Serious eye damage/eye irritation, Category 1

H318

Specific target organ toxicity — Single exposure, Category 3,

H335

Respiratory tract irritation

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

Extremely flammable gas. Harmful if inhaled. May cause respiratory irritation. Causes skin irritation. Causes serious eye damage.

#### 2.2. Label elements

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

Hazard pictograms (CLP)





GHS02

: Danger

GHS05

GHS07

Signal word (CLP)

Hazard statements (CLP)

: H220 - Extremely flammable gas. H315 - Causes skin irritation.

H318 - Causes skin irritation.
H318 - Causes serious eye damage.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

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

P410+P403 - Protect from sunlight. Store in a well-ventilated place.

#### 2.3. Other hazards

No additional information available

#### **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

: TRIMETHYLAMINE (TMA) Name

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Trimethylamine (TMA)	(CAS-No.) 75-50-3 (EC-No.) 200-875-0	>= 98.97	Flam. Gas 1, H220 Press. Gas (Comp.), H280 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-statements: see section 16

#### 3.2. Mixtures

Not applicable

#### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. People with over sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention. Call a poison center or a doctor if you feel

: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a First-aid measures after inhalation

doctor if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get

medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Serious damage to eyes.

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

Treat symptomatically.

#### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2). Water spray. Dry

powder. Foam.

Unsuitable extinguishing media : Strong water jet.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas.

Reactivity in case of fire : At high temperature may liberate dangerous gases.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

: Approach from upwind. Use water spray or fog for cooling exposed containers. Keep away Precautionary measures fire

from combustible materials.

4/28/2020 (Version: 2.0) EU - en 2/10

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Firefighting instructions

: Use water spray or fog for cooling exposed containers. Cool adjacent tanks / containers / drums with water jet. Do not allow water to enter the vessels, a violent reaction may occur.

Do not enter fire area without proper protective equipment, including respiratory protection.

Exercise caution when fighting any chemical fire. Keep upwind. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Eliminate all ignition sources if safe to do so. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : High temperature decomposition products are harmful by inhalation. Inhalation of vapour can cause breathing difficulties.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures Fliminate every possible source of i

: Eliminate every possible source of ignition. Access forbidden to unauthorised personnel. Use protective clothing. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters. Use care in walking on spilled material. Do not inhale vapour.

#### 6.1.1. For non-emergency personnel

**Emergency procedures** 

Protective equipment : Wear recommended personal protective equipment. Dust formation: dust mask. Wear suitable protective clothing, gloves and eye or face protection.

: Ventilate spillage area. Do not touch or walk on the spilled product. Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Measures in case of dust release : In case of dust production: protective goggles. Dust mask. In case of vapour formation use adequate respirator.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Only qualified personnel equipped with suitable protective equipment may intervene. Wear suitable protective clothing, gloves and eye/face protection. For further information refer to section

8: "Exposure controls/personal protection".

Emergency procedures : Avoid contact with skin and eyes. Do not touch spilled material. Evacuate unnecessary personnel. Keep away from combustible material. Keep public away from danger area. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Ventilate area. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Methods for cleaning up

Avoid release to the environment. Do not allow to enter drains or water courses. Do not discharge into drains or waterways without neutralizing.

#### 6.3. Methods and material for containment and cleaning up

For containment : Comply with the safety intructions. Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams.

: Clean up any spills as soon as possible, using an absorbent material to collect it. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding

agents). Sweep or shovel spills into appropriate container for disposal. Minimise generation of dust. Notify authorities if product enters sewers or public waters.

Other information : Dispose of contaminated materials in accordance with current regulations. Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13. For further information refer to section 13.

#### SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed

: Use adequate ventilation to keep vapour concentrations below applicable standard. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.

Precautions for safe handling

: Avoid dust formation. Avoid prolonged and repeated contact with skin. Contaminated work clothing should not be allowed out of the workplace. Do not spray on an open flame or other ignition source. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Keep valves and fittings free from oil and grease. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Take precautionary measures against static discharge. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Eliminate all ignition sources if safe to do so. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.

4/28/2020 (Version: 2.0) EU - en 3/10

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations. Containers which are opened should be properly

resealed and kept upright to prevent leakage. Ensure adequate ventilation, especially in

confined areas.

Storage conditions : Store in a well-ventilated place. Store locked up. Keep container tightly closed. Keep cool.

: Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.

Incompatible materials : Extremely high or low temperatures.

Heat and ignition sources : Do not smoke. KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.

Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

Storage area : Avoid: Extremely high or low temperatures. Heat and ignition sources.

#### 7.3. Specific end use(s)

Incompatible products

No additional information available

#### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

#### Appropriate engineering controls:

Avoid contact with skin, eyes and clothing. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Consider work permit system e.g. for maintenance activities. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. In the event that dust and/or fine particles are generated with this product, it is prudent to minimize prolonged inhalation exposure to these forms not to exceed the occupational exposure limit. Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure. Ensure good ventilation of the work station.

#### Personal protective equipment:

Gloves. Safety glasses. Heatproof clothing. Gas mask.

#### Hand protection:

Protective gloves. EN 374

#### Eye protection:

Safety glasses. EN 166. Where excessive dust may result, wear goggles. Safety glasses

#### Skin and body protection:

Wear suitable protective clothing. In case of dust production: dustproof clothing. In case of dust production: head/neck protection. Where contact with eyes or skin is likely, wear suitable protection

#### Respiratory protection:

Dust production: dust mask with filter type P1. Where excessive vapour may result, wear approved mask. [In case of inadequate ventilation] wear respiratory protection.

#### Personal protective equipment symbol(s):









#### Environmental exposure controls:

Avoid release to the environment.

#### Consumer exposure controls:

Do not eat, drink or smoke during use. Always wash hands after handling the product. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing.

#### Other information:

Always wash hands after handling the product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Physical state : Gas
Molecular mass : 59.11 g/mol
Colour : Colorless

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

: Rotten egg Odour threshold : No data available рΗ : 11.2 (40%) Relative evaporation rate (butylacetate=1) : No data available : No data available Melting point Freezing point : -117 °C @ 101.325 kPa : 3.5 °C @ 101.325 kPa Boiling point Flash point : -6.6 °C @ 101.325 kPa Auto-ignition temperature : 190 °C @ 101.325 kPa Decomposition temperature : No data available

Flammability (solid, gas) : Extremely flammable gas.

Vapour pressure : 91 - 227 kPa @ 0 - 25°C

Relative vapour density : 2.09 (Air:1)
Relative density : No data available
Density : 0.627 g/cm³ @ 25°C

Solubility : Water: 410 - 890 g/l @ 19 - 30 °C

Log Pow : -3.5 / -1.89 n-oktanol/water (@ 25°C, pH=7.0 - 10.1)

 Viscosity, kinematic
 : 0.823 mm²/s

 Viscosity, dynamic
 : 0.516 mPa·s

 Explosive properties
 : No data available

 Oxidising properties
 : No data available

Lower explosive limit (LEL) : 2 vol %
Upper explosive limit (UEL) : 11.6 vol %

9.2. Other information

Surface tension mN/m @ 20°C : 14.2

Volatile component : 100 vol.%

#### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Extremely flammable gas.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.

#### 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 toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

TRIMETHYLAMINE (TMA)	
LD50 oral	766 mg/kg
LD50 dermal	5000 mg/kg
LC50 inhalation rat (mg/l) 8.6	

Trimethylamine (TMA) (75-50-3)	
LD50 oral rat	766 mg/kg
LD50 dermal rat	> 5000 mg/kg

Skin corrosion/irritation : Causes skin irritation.
pH: 11.2 (40%)

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Serious eye damage/irritation : Causes serious eye damage.

pH: 11.2 (40%)

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Trimethylamine (TMA) (75-50-3)	
LOAEC (inhalation, rat, gas, 90 days)	74 ppm
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	0.025 mg/l air

Aspiration hazard : Not classified

TRIMETHYLAMINE (TMA)		
	Viscosity, kinematic	0.823 mm²/s

#### **SECTION 12: Ecological information**

#### 12.1. Toxicity

: The product is not considered harmful to aquatic organisms nor to cause long-term Ecology - general

adverse effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

Hazardous to the aquatic environment, long-term

(chronic)

: Not classified.

TRIMETHYLAMINE (TMA)	
LC50 fish 1	> 100 mg/l
EC50 other aquatic organisms 1	28 mg/l

Trimethylamine (TMA) (75-50-3)	
EC50 Daphnia 1	139.95 mg/l
EC50 72h algae (1)	150 mg/l
EC50 72h algae (2)	90.6 mg/l

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

TRIMETHYLAMINE (TMA)	
Log Pow	-3.5 / -1.89 n-oktanol/water (@ 25°C, pH=7.0 - 10.1)

### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations. Waste Management Regulation

published in the Official Journal numbered 29314 on April 2, 2015. Regulation on Incineration of Waste Materials published in the Official Journal numbered 27721 on

October 6, 2010.

: Do not remove as household garbage. Dispose of contents/container in accordance with Waste treatment methods

licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Additional information : Empty containers should be taken for recycling, recovery or waste in accordance with local

regulation.

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

#### **SECTION 14: Transport information**

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1083	UN 1083	UN 1083	UN 1083	UN 1083
14.2. UN proper shipping	g name			
TRIMETHYLAMINE, ANHYDROUS	TRIMETHYLAMINE, ANHYDROUS	Trimethylamine, anhydrous	TRIMETHYLAMINE, ANHYDROUS	TRIMETHYLAMINE, ANHYDROUS
Transport document descr	iption			
UN 1083 TRIMETHYLAMINE, ANHYDROUS, 2.1, (B/D)	UN 1083 TRIMETHYLAMINE, ANHYDROUS, 2.1	UN 1083 Trimethylamine, anhydrous, 2.1	UN 1083 TRIMETHYLAMINE, ANHYDROUS, 2.1	UN 1083 TRIMETHYLAMINE, ANHYDROUS, 2.1
14.3. Transport hazard o	class(es)			
2.1	2.1	2.1	2.1	2.1
2	2	2	2	*
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information	No supplementary information available			

#### 14.6. Special precautions for user

#### **Overland transport**

: 2F Classification code (ADR) Special provisions (ADR) : 662 Limited quantities (ADR) : 0 Excepted quantities (ADR) : E0 Packing instructions (ADR) : P200 : MP9 Mixed packing provisions (ADR) Portable tank and bulk container instructions : (M), T50 (ADR)

: PxBN(M) Tank code (ADR) Tank special provisions (ADR) : TA4, TT9 Vehicle for tank carriage : FL Transport category (ADR)

Special provisions for carriage - Loading, : CV9, CV10, CV36

unloading and handling (ADR)

Special provisions for carriage - Operation (ADR) : S2, S20 Hazard identification number (Kemler No.) : 23 Orange plates

1083

Tunnel restriction code (ADR) : B/D

Transport by sea

: 0 Limited quantities (IMDG) Excepted quantities (IMDG) : E0 Packing instructions (IMDG) : P200 Tank instructions (IMDG) : T50 EmS-No. (Fire) : F-D

4/28/2020 (Version: 2.0) EU - en 7/10

#### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

EmS-No. (Spillage): S-UStowage category (IMDG): BStowage and handling (IMDG): SW2

Properties and observations (IMDG) : Liquefied, flammable gas with a fishy odour. Explosive limits: 2% to 12% Much heavier

than air (2.1). Boiling point: 3°C.

Air transport

PCA Excepted quantities (IATA) : E0 PCA Limited quantities (IATA) : Forbidden PCA limited quantity max net quantity (IATA) : Forbidden PCA packing instructions (IATA) : Forbidden PCA max net quantity (IATA) : Forbidden CAO packing instructions (IATA) : 200 CAO max net quantity (IATA) : 150kg : A1 Special provisions (IATA) ERG code (IATA) : 10L

Inland waterway transport

Classification code (ADN) : 2F
Special provisions (ADN) : 662
Limited quantities (ADN) : 0
Excepted quantities (ADN) : E0
Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EX, A

Ventilation (ADN) : VE01

Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : 2F Special provisions (RID) : 662 Limited quantities (RID) : 0 Excepted quantities (RID) : E0 Packing instructions (RID) : P200 Mixed packing provisions (RID) : MP9 Portable tank and bulk container instructions (RID) : T50(M) Tank codes for RID tanks (RID) : PxBN(M)

Special provisions for RID tanks (RID) : TU38, TE22, TA4, TT9, TM6

Transport category (RID) : 2

Special provisions for carriage - Loading, : CW9, CW10, CW36

unloading and handling (RID)

Colis express (express parcels) (RID) : CE3
Hazard identification number (RID) : 23

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

#### **SECTION 15: Regulatory information**

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

TRIMETHYLAMINE (TMA) is not on the REACH Candidate List

TRIMETHYLAMINE (TMA) is not on the REACH Annex XIV List

TRIMETHYLAMINE (TMA) is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

TRIMETHYLAMINE (TMA) is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

#### 15.1.2. National regulations

#### Germany

12th Ordinance Implementing the Federal : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance) Immission Control Act - 12.BlmSchV

4/28/2020 (Version: 2.0) EU - en 8/10

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other info	ormation
Abbreviations and acronyms	s:
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative
Data sources	: Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013. ECHA (European Chemicals Agency). Supplier's safety documents.
Other information	: The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:		
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4	
Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Flam. Gas 1	Flammable gases, Category 1	
Press. Gas (Comp.)	Gases under pressure : Compressed gas	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	
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.	

### Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

#### SDS EU (REACH Annex II)

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable