

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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

1.1 Product identifier

Trade name : Acrylonitrile (stabilized with MEHQ)

Product code : A0146 Index-No. : 608-003-00-4 EC-No. : 203-466-5

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

Use of the Substance/Mixture : Use as laboratory reagent

1.3 Details of the supplier of the safety data sheet

Company : TCI EUROPE N.V.

Address : Boereveldseweg 6 - Haven 1063, B-2070 Zwijndrecht, Belgium

Telephone : +32 (0)3 735 07 00
Telefax : +32 (0)3 735 07 01
E-mail address of person respon- : sales-eu@tcichemicals.com

sible for the SDS

1.4 Emergency telephone number

Emergency telephone number : +44 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2 H225: Highly flammable liquid and vapour.

Acute toxicity, Category 3 H301: Toxic if swallowed. Acute toxicity, Category 2 H330: Fatal if inhaled.

Acute toxicity, Category 2

H310: Fatal in contact with skin.

Skin irritation, Category 2

H315: Causes skin irritation.

Serious eye damage, Category 1

Skin sensitisation, Category 1

H317: May cause an allergic skin reaction.

Germ cell mutagenicity, Category 2

H341: Suspected of causing genetic defects.

Carcinogenicity, Category 1B H350: May cause cancer.

Reproductive toxicity, Category 2 H361: Suspected of damaging fertility or the unborn

child.

Specific target organ toxicity - single exposure, Category 1, Liver, Nervous system

H370: Causes damage to organs.

Specific target organ toxicity - single exposure, Category 3, Respiratory system

Specific target organ toxicity - repeated exposure, Category 1, Liver, Blood, Respiratory system, Nervous system, Kidney, Testes
Long-term (chronic) aquatic hazard, Category

H372: Causes damage to organs through prolonged or repeated exposure.

H472: Causes damage to organs through prolonged or repeated exposure.

H472: Causes damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :











Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H310 + H330 Fatal in contact with skin or if inhaled.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to organs (Liver, Nervous system).

H372 Causes damage to organs (Liver, Blood, Respiratory system, Nervous system, Kidney, Testes) through prolonged or repeated ex-

posure.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P262 Do not get in eyes, on skin, or on clothing.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a

POISON CENTER/ doctor. Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately

all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON

CENTER/ doctor.

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/ doctor. P308 + P311 IF exposed or concerned: Call a POISON CENTER/

doctor.

P370 + P378 In case of fire: Use dry sand, dry chemical or alco-

hol-resistant foam to extinguish.

P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container

tightly closed.

Additional Labelling

Restricted to professional users.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : Acrylonitrile (stabilized with MEHQ)

Index-No. : 608-003-00-4 EC-No. : 203-466-5

Components

Chemical name	CAS RN	Concentration (% w/w)	M-Factor, SCL, ATE
	EC-No.		
Acrylonitrile	107-13-1	>= 90 - <= 100	
	203-466-5		

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor/ physician.

In case of skin contact Take off all contaminated clothing immediately.

If on skin, rinse well with water.

Call a POISON CENTER or doctor/ physician.

In case of eye contact Rinse with plenty of water.

If easy to do, remove contact lens, if worn.

Immediately call a POISON CENTER or doctor/ physician.

If swallowed Immediately call a POISON CENTER or doctor/ physician.

Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

None known.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry powder, Foam, Water spray, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

No information available.

5.3 Advice for firefighters

Special protective equipment for :

Specific extinguishing methods

firefighters

Use personal protective equipment.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Cool closed containers exposed to fire with water spray. Remove undamaged containers from fire area if it is

safe to do so.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective equipment. Keep people away from and

> upwind of spill/leak. Ensure adequate ventilation. Entry to noninvolved personnel should be controlled around the leakage area by

roping off, etc.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up Collect as much of the spill as possible with a suitable absorbent

material.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : Prevent generation of vapour or mist.

Take precautionary measures against static discharge.

Use explosion-proof equipment.

Local/Total ventilation : Ensure adequate ventilation.

Handle product only in closed system or provide appropriate exhaust

ventilation at machinery. Use a local exhaust ventilation.

Advice on safe handling : Avoid contact with skin, eyes and clothing.

Wear personal protective equipment.

Keep away from heat, hot surfaces, sparks, open flames and other

ignition sources. No smoking.

Do not subject to grinding, shock or friction. Wash hands and face thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas

and containers

Keep container tightly closed. Store in a cool and shaded area. Keep

in a well-ventilated place. Use explosion-proof equipment. Store

locked up. Avoid exposure to light.

Storage class (TRGS 510) : 3

7.3 Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS RN	Value type (Form of exposure)	Control parameters	Basis	
Acrylonitrile	107-13-1	Acceptable con- centration	0,12 ppm 0,26 mg/m3	DE TRGS 910	
	Further information: Skin-resorptive				
		Tolerable concen- tration	1,2 ppm 2,6 mg/m3	DE TRGS 910	
	Peak-limit: excursion factor (category): 8 - Excursion factor according to Number 3.2.6				
	Further information: Skin-resorptive				
		TWA	0,45 ppm 1 mg/m3	2004/37/EC	
	Further information: Dermal sensitisation, Skin, Carcinogens or mutagens				
		STEL	1,8 ppm 4 mg/m3	2004/37/EC	
	Further information: Dermal sensitisation, Skin, Carcinogens or mutagens				

8.2 Exposure controls

Engineering measures

Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment

Eye/face protection : Safety glasses, Safety goggles, Face-shield

Hand protection : Impervious gloves

Skin and body protection : Impervious protective clothing

Respiratory protection : Gas mask

Self-contained breathing apparatus

*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid Colour : colourless

Odour : No data available

Odour Threshold : 17 ppm Melting point/freezing point : -84 °C Boiling point/boiling range : 79 °C

Flammability : No data available

Upper explosion limit / Upper : 17 %(V)

flammability limit

Lower explosion limit / Lower : 3 %(V)

flammability limit

Flash point : -6 °C Auto-ignition temperature : 481 °C

Decomposition temperature : No data available pH : No data available

Viscosity

Viscosity, dynamic : No data available Viscosity, kinematic : No data available

Solubility(ies)

Water solubility : 70 g/l (20 °C)

soluble

Solubility in other solvents : Solvent: Ether

soluble

Solvent: Alcohol

soluble

Solvent: Benzene

soluble

Solvent: Acetone

soluble

Partition coefficient: n- : 0,25

octanol/water

Vapour pressure : 13,3 kPa (23 °C)

Relative density : 0,81 Relative vapour density : 1,8

Particle characteristics : No data available

9.2 Other information

Refractive index : 1,39

Molecular weight : 53,06 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Polymerization may occur under the influences of heat, light or on contact with polymerization initiators such as peroxides etc.

10.3 Possibility of hazardous reactions

Hazardous reactions : None under normal processing.

10.4 Conditions to avoid

Conditions to avoid : Heat, Electrical spark, Open flame, Electrostatic discharge, Exposure

to light.

10.5 Incompatible materials

Materials to avoid : Bases,

Acids,

Oxidizing agents, Copper, Copper alloys,

10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx)

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity : Assessment: The component/mixture is toxic after single ingestion.

Acute inhalation toxicity : Assessment: The component/mixture is highly toxic after short term

inhalation.

Acute dermal toxicity : Assessment: The component/mixture is highly toxic after single con-

tact with skin.

Components:

Acrylonitrile:

Acute oral toxicity : LD50 (Rat): 78 mg/kg

Assessment: The component/mixture is toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): 425 ppm

Exposure time: 4 h
Test atmosphere: gas

Assessment: The component/mixture is highly toxic after short term

inhalation.

Acute dermal toxicity : LD50 (Rat): 148 mg/kg

Assessment: The component/mixture is highly toxic after single con-

tact with skin.

Skin corrosion/irritation

Product:

Result : Skin irritation

Components:

Acrylonitrile:

Result : Skin irritation

Serious eye damage/eye irritation

Product:

Result : Irreversible effects on the eye

Components:

Acrylonitrile:

Result : Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Assessment : May cause sensitisation by skin contact.

Components:

Acrylonitrile:

Assessment : May cause sensitisation by skin contact.

Germ cell mutagenicity

Product:

Germ cell mutagenicity- As-

sessment

Suspected of inducing heritable mutations in the germ cells of hu-

mans.

Components:

Acrylonitrile: Germ cell mutagenicity- As-

sessment

Suspected of inducing heritable mutations in the germ cells of hu-

mans.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Presumed to have carcinogenic potential for humans

Components:

Acrylonitrile:

Carcinogenicity - Assessment : Presumed to have carcinogenic potential for humans

Reproductive toxicity

Product:

Reproductive toxicity - Assess-

ment

Suspected human reproductive toxicant

Components:

Acrylonitrile:

Reproductive toxicity - Assess-

ment

Suspected human reproductive toxicant

STOT - single exposure

Product:

Assessment : May cause respiratory irritation.

Target Organs : Liver, Nervous system
Assessment : Causes damage to organs.

Components:

Acrylonitrile:

Assessment : May cause respiratory irritation.

Target Organs : Liver, Nervous system
Assessment : Causes damage to organs.

STOT - repeated exposure

Product:

Target Organs : Liver, Blood, Respiratory system, Nervous system, Kidney, Testes
Assessment : Causes damage to organs through prolonged or repeated exposure.

Components:

Acrylonitrile:

Target Organs : Liver, Blood, Respiratory system, Nervous system, Kidney, Testes
Assessment : Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity: No information available.Aspiration hazard: No information available.RTECS No.: AT5250000 (Acrylonitrile)

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to

have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Components:

Acrylonitrile:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 11800 μg/l

Exposure time: 96 h

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Components:

Acrylonitrile:

Partition coefficient: n-

octanol/water

: 0,25

12.4 Mobility in soil

Components:

Acrylonitrile:

Distribution among environmen- : Koc: 33

tal compartments

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be

either persistent, bioaccumulative and toxic (PBT), or very persistent

and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to

have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Disposal in accordance with local and national regulations.

Take precautions against ignition or explode.

Entrust disposal to a licensed waste disposal company.

Contaminated packaging : Disposal in accordance with local and national regulations.

Before disposal of used container, remove contents completely.

SECTION 14: Transport information

14.1 UN number or ID number

 ADR
 : UN 1093

 IMDG
 : UN 1093

 IATA (Cargo)
 : UN 1093

 IATA (Passenger)
 : UN 1093

Not permitted for transport

14.2 UN proper shipping name

ADR : ACRYLONITRILE, STABILIZED
IMDG : ACRYLONITRILE, STABILIZED

IATA (Cargo) : Acrylonitrile, stabilized

IATA (Passenger) : Acrylonitrile, stabilized

Not permitted for transport

14.3 Transport hazard class(es)

Class Subsidiary risks

ADR : 3 6.1 IMDG : 3 6.1 IATA (Cargo) : 3 6.1

IATA (Passenger) : Not permitted for transport

14.4 Packing group

ADR

Packing group : I
Classification Code : FT1
Hazard Identification Number : 336
Tunnel restriction code : (C/E)

IMDG

Packing group : I

EmS Code : F-E, S-D

IATA (Cargo)

Packing instruction (cargo air- : 361

craft)

Packing group : I

IATA (Passenger) : Not permitted for transport

14.5 Environmental hazards

ADR

Environmentally hazardous : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Conditions of restriction for the following entries should be considered:

Number on list 40, 3

Acrylonitrile (Number on list 28)

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous

chemicals

Not applicable

REACH - Candidate List of Substances of Very High Concern

for Authorisation (Article 59).

Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the

ozone layer

Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

REACH - List of substances subject to authorisation (Annex

XIV)

Not applicable

Water hazard class (Germany) : WGK 3 highly hazardous to water

Classification according to AwSV, Annex 1 (5.2)

Other regulations:

The product is subject to the supply restrictions of the Ordinance on the Prohibition of Chemicals.

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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

CH BAGREG : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

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

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

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

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

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

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

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

NZIoC : Not in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

2004/37/EC : Europe. Directive 2004/37/EC on the protection of workers from the

risks related to exposure to carcinogens or mutagens at work

DE TRGS 910 : Germany. TRGS 910 - Substance-specific acceptable and tolerable

concentrations and equivalence values for carcinogenic hazardous

substances.

2004/37/EC / STEL : 2004/37/EC / TWA : :

DE TRGS 910 / Acceptable

concentration

DE TRGS 910 / Tolerable con-

centration

Short term exposure limit Long term exposure limit

Acceptable concentration

Tolerable concentration

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-

operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

DE / 6N