SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date Not Applicable **Revision Number** N/A

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

1.1. Product identifier

Product Code(s) DRE-C10045500

Product Name Acrylonitrile

Form Not applicable

REACH registration number -

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II

Substance Name acrylonitrile

EC No (EU Index No) 203-466-5

CAS No. 107-13-1

Pure substance/mixture Substance

Formula C3 H3 N

Molecular weight 53.06

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

Recommended use Laboratory use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

Will be updated as per company.

1.4. **Emergency telephone number**

Emergency Telephone Will be updated as per company.

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**
Austria	No information available
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Denmark	
France	
Hungary	
Ireland	
Italy	
Lithuania	
Luxembourg	
Netherlands	
Norway	
Portugal	
Romania	
Slovakia	

Slovenia	
Spain	
Sweden	
Switzerland	

SECTION 2: Hazards identification

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

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

Flammable liquids	Category 2 - (H225)
Acute toxicity - Oral	Category 3 - (H301)
Acute toxicity - Dermal	Category 2 - (H310)
Acute toxicity - Inhalation (Vapours)	Category 1 - (H330)
Skin irritation	Category 2 - (H315)
Serious eye damage	Category 1 - (H318)
Skin sensitisation	Category 1 - (H317)
Carcinogenicity	Category 1A - (H350)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Category 3 Target organ effects: Respiratory irritation.	
Hazardous to the aquatic environment - chronic	Category 2 - (H411)

2.2. **Label elements**

Contains acrylonitrile

Signal word
Danger

Hazard statements
H225 - Highly flammable liquid and vapour.
H301 - Toxic if swallowed.
H310 - Fatal in contact with skin.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.

H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.
H350 - May cause cancer.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements - EU (§28, 1272/2008)
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, vapors and 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 and face protection
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
P310 - Immediately call a POISON CENTER or doctor
P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish
P391 - Collect spillage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

2.3. Other hazards

Toxic to aquatic life.

PBT & vPvB This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

Chemical name	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation	EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances
acrylonitrile	-	-

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
acrylonitrile 107-13-1	100	-	203-466-5 (608-003-00-4)	Flam. Liq. 2 (H225) Acute Tox. 1 (H330)	-	-	-	D

				Acute Tox. 2 (H310) Acute Tox. 3 (H301) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Carc. 1A (H350) STOT SE 3 (H335) Aquatic Chronic 2 (H411)				

CLP Notes:
Note D - Certain substances which are susceptible to spontaneous polymerization or decomposition are generally placed on the market in a stabilized form. It is in this form that they are listed in Part 3 of Annex VI to Regulation (EC) No 1272/2008. However, such substances are sometimes placed on the market in a non-stabilized form. In this case, the supplier who places such a substance on the market must state on the label the name of the substance followed by the words "non-stabilized".

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
acrylonitrile 107-13-1	193	63	0.47	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.

Inhalation Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way

	valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention. May cause an allergic skin reaction.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Do not breathe vapour or mist. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Avoid contact with skin, eyes or clothing.

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

Symptoms	Coughing and/ or wheezing. Difficulty in breathing. Burning sensation. Itching. Rashes. Hives.
Effects of Exposure	May cause cancer.

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

Note to doctors	May cause sensitisation in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Product is or

contains a sensitiser. May cause sensitisation by skin contact.

5.3. **Advice for firefighters**

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

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

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Do not breathe vapour or mist.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. **Environmental precautions**

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.

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

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. **Reference to other sections**

Reference to other sections	See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse. Do not breathe vapour or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not breathe vapour or mist.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions#

Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up.

Storage class (TRGS 510)

LGK 3.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Will be updated as per company.

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
acrylonitrile 107-13-1	TWA: 1 mg/m³ TWA: 0.45 ppm STEL: 4 mg/m³ STEL: 1.8 ppm + Sk*	Sk* Sh+	TWA: 2 ppm TWA: 0.45 ppm TWA: 4.4 mg/m³ TWA: 1 mg/m³ STEL: 1.8 ppm STEL: 4 mg/m³ Sk*	TWA: 4.5 mg/m³ Sk* Skin Sensitisation	TWA: 0.45 ppm TWA: 1 mg/m³ STEL: 1.8 ppm STEL: 4 mg/m³ Sk* Skin Sensitisation
Chemical name	**Cyprus**	**Czech Republic**	**Denmark**	**Estonia**	**Finland**
acrylonitrile 107-13-1	TWA: 1 mg/m³ TWA: 0.45 ppm STEL: 4 mg/m³ STEL: 1.8 ppm Sk*	TWA: 2 mg/m³ Sk* S+ Ceiling: 6 mg/m³ Ceiling: 4 mg/m³	TWA: 2 ppm TWA: 4 mg/m³ STEL: 4 ppm STEL: 8 mg/m³ Sk*	TWA: 2 ppm TWA: 4.5 mg/m³ STEL: 6 ppm STEL: 13 mg/m³ Sk* S+	TWA: 2 ppm TWA: 4.4 mg/m³ STEL: 4 ppm STEL: 8.8 mg/m³ STEL: 1.8 ppm STEL: 4 mg/m³ Sk*
Chemical name	**France**	**Germany TRGS**	**Germany DFG**	**Greece**	**Hungary**
acrylonitrile 107-13-1	TWA: 2 ppm TWA: 4.5 mg/m³ STEL: 15 ppm STEL: 32.5 mg/m³ Sk*	Sk*	TWA: 2 mg/m³ Peak: 2 mg/m³ Sk* skin sensitizer	TWA: 2 ppm TWA: 4.5 mg/m³ STEL: 5 mg/m³ Sk*	TWA: 4.3 mg/m³ STEL: 5 mg/m³ Sk*
Chemical name	**Ireland**	**Italy MDLPS**	**Italy AIDII**	**Latvia**	**Lithuania**
acrylonitrile 107-13-1	TWA: 0.45 ppm TWA: 1 mg/m³ STEL: 1.8 ppm STEL: 4 mg/m³ Sk* Sens+	-	TWA: 2 ppm TWA: 4.3 mg/m³ Sk*	-	TWA: 2 ppm TWA: 4.5 mg/m³ STEL: 6 ppm STEL: 13 mg/m³
Chemical name	**Luxembourg**	**Malta**	**Netherlands**	**Norway**	**Poland**
acrylonitrile 107-13-1	-	-	TWA: 0.9 ppm TWA: 1 mg/m³ STEL: 4.5 ppm STEL: 5 mg/m³ Sk*	: 1 mg/m³ : 0.45 ppm STEL: 4 mg/m³ STEL: 1.8 ppm Sk* A+	TWA: 2 mg/m³ STEL: 10 mg/m³ Sk*
Chemical name	**Portugal**	**Romania**	**Slovakia**	**Slovenia**	**Spain**
acrylonitrile 107-13-1	TWA: 2 ppm Sk*	TWA: 0.45 ppm TWA: 1 mg/m³ TWA: 2.3 ppm TWA: 5 mg/m³ STEL: 4.6 ppm STEL: 10 mg/m³ STEL: 4 mg/m³	TWA: 0.45 ppm TWA: 1 mg/m³ TWA: 7 mg/m³ TWA: 3 ppm STEL: 1,8 ppm STEL: 4 mg/m³ Sk*	TWA: 7 mg/m³ TWA: 3 ppm STEL: 12 ppm STEL: 28 mg/m³ Sk*	TWA: 2 ppm TWA: 4.4 mg/m³ Sk* Sen+

		STEL: 1.8 ppm Sk*	S+ Ceiling: 5 mg/m³		

Chemical name	Sweden	Switzerland	United Kingdom
acrylonitrile 107-13-1	NGV: 2 ppm NGV: 4.5 mg/m³ Vägledande KGV: 6 ppm Vägledande KGV: 13 mg/m³ Sk*	TWA: 2 ppm TWA: 4.5 mg/m³ STEL: 2 ppm STEL: 4.5 mg/m³ Sk* S+	TWA: 2 ppm TWA: 4.4 mg/m³ STEL: 6 ppm STEL: 13.2 mg/m³ Sk*

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
acrylonitrile 107-13-1	-	-	-	6.5 mg/24 hours - urine (Thiocyanates) - urine collected over 24 hours <3 mg - urine and blood (Thiocyanate ratio in urine (mg/g Creatinine) and Carboxyhemoglobin in blood (%)) - urine and blood collected at the end of the work shift	-

Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
acrylonitrile 107-13-1	-	-	-	12 pmol/g Globin - BAR (after exposure for at least 3 months) erythrocytes 15 µg/g Creatinine - BAR (for long-term exposures: at the end of the shift after several shifts) urine 650 pmol/g Globin - (after exposure for at least 3 months) - erythrocyte fraction of whole blood 1400 pmol/g Globin - (after exposure for at least 3	-

				months) - erythrocyte fraction of whole blood 2450 pmol/g Globin - (after exposure for at least 3 months) - erythrocyte fraction of whole blood 6500 pmol/g Globin - (after exposure for at least 3 months) - erythrocyte fraction of whole blood 17000 pmol/g Globin - (after exposure for at least 3 months) - erythrocyte fraction of whole blood	

Chemical name	Slovenia	Spain	Switzerland	United Kingdom
acrylonitrile 107-13-1	6500 pmol/g Globin - erythrocyte fraction of the whole blood (N-(2-Cyanoethyl)valine) - after a minimum of 3 months exposure	-	-	-

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
acrylonitrile 107-13-1	-	1.4 mg/kg bw/day [4] [6]	1.8 mg/m³ [5] [6] 10 mg/m³ [5] [7]

Notes

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation

Chemical name	Oral	Dermal	Inhalation
acrylonitrile 107-13-1	0.009 mg/kg bw/day [4] [6]	-	0.1 mg/m³ [4] [6] 0.06 mg/m³ [5] [6] 1 mg/m³ [5] [7]

Notes

[4]	Systemic health effects.
[5]	Local health effects.
[6]	Long term.
[7]	Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
acrylonitrile 107-13-1	17 µg/L	-	17 µg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
acrylonitrile 107-13-1	0.0188 mg/kg sediment dw	-	5 mg/L	0.00268 mg/kg soil dw	-

8.2. **Exposure controls**

Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Hand protection The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective Viton™ gloves. Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots. Impervious clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate

certified respirators.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not breathe vapour or mist.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. **Information on basic physical and chemical properties**

Appearance	Liquid
Physical state	Liquid
Colour	colourless
Odour	Pungent
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	-83.5 °C	None known
Initial boiling point and boiling range	77.28 °C	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	0 °C	None known
Autoignition temperature	481 °C	None known
Decomposition temperature		None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility		@ 20 °C
Solubility(ies)	No data available	None known
Partition coefficient	0.017	None known
Vapour pressure	115 hPa	@ 20°C
Relative density	0.806	@ 20 °C
Bulk density	No data available	
Liquid Density	No data available	

Relative vapour density	1.83	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. **Other information**

Molecular formula	C3 H3 N
Molecular weight	53.06

9.2.1. Information with regards to physical hazard classes
No information available

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. **Reactivity**

Reactivity No information available.

10.2. **Chemical stability**

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

10.3. **Possibility of hazardous reactions**

Possibility of hazardous reactions None under normal processing.

10.4. **Conditions to avoid**

Conditions to avoid Heat, flames and sparks. Excessive heat.

10.5. **Incompatible materials**

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. **Hazardous decomposition products**

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Inhalation Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components). May cause irritation of respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Fatal in contact with skin. (based on components). May cause sensitisation by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Causes skin irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Redness. Burning. May cause blindness. Itching. Rashes. Hives. May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity Fatal in contact with skin. Fatal if inhaled. Toxic if swallowed.

Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
acrylonitrile	= 78 mg/kg (Rat)	= 63 mg/kg (Rabbit)	= 0.47 mg/L (Rat) 4 h

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
acrylonitrile	Carc. 1B

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure Based on available data, the classification criteria are not met.

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

11.2. **Information on other hazards**

11.2.1. **Endocrine disrupting properties**

Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors.

11.2.2. **Other information**

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. **Toxicity**

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
acrylonitrile	-	LC50: 6.7 - 15mg/L (96h, Pimephales promelas) LC50: 8.0 - 12.0mg/L (96h, Lepomis macrochirus) LC50: =33.5mg/L (96h,	-	EC50: =7.38mg/L (48h, Daphnia magna)

		Poecilia reticulata) LC50: =25mg/L (96h, Brachydanio rerio) LC50: =24mg/L (96h, Oncorhynchus mykiss) LC50: =18.07mg/L (96h, Cyprinus carpio) LC50: 8.7 - 10mg/L (96h, Lepomis macrochirus) LC50: 28 - 39mg/L (96h, Pimephales promelas)		

12.2. **Persistence and degradability**

Persistence and degradability No information available.

12.3. **Bioaccumulative potential**

Bioaccumulation

Chemical name	Partition coefficient
acrylonitrile	0.017

12.4. **Mobility in soil**

Mobility in soil No information available.

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

PBT and vPvB assessment Based on available data, the classification criteria are not met.

Chemical name	PBT and vPvB assessment
acrylonitrile	The substance is not PBT / vPvB

12.6. **Endocrine disrupting properties**

Endocrine disrupting properties Based on available data, the classification criteria are not met.

12.7. **Other adverse effects**

Other adverse effects No information available.

PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1093
14.2 UN proper shipping name	Acrylonitrile, stabilized
14.3 Transport hazard class(es)	3
Subsidiary hazard class	6.1
14.4 Packing group	I
Description	UN1093, Acrylonitrile, stabilized, 3 (6.1), I
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	A209
ERG Code	3P

IMDG

14.1 UN number or ID number	UN1093
14.2 UN proper shipping name	Acrylonitrile, stabilized
14.3 Transport hazard class(es)	3
Subsidiary hazard class	6.1
14.4 Packing group	I
Description	UN1093, Acrylonitrile, stabilized, 3 (6.1), I, (0°C c.c.), Marine pollutant
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	386
EmS-No.	F-E, S-D
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN1093
14.2 UN proper shipping name	Acrylonitrile, stabilized
14.3 Transport hazard class(es)	3
Subsidiary hazard class	6.1
14.4 Packing group	I
Description	UN1093, Acrylonitrile, stabilized, 3 (6.1), I, Environmentally Hazardous
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	386, 676
Classification code	FT1

ADR

14.1 UN number or ID number	UN1093
14.2 UN proper shipping name	Acrylonitrile, stabilized
14.3 Transport hazard class(es)	3
Subsidiary hazard class	6.1
14.4 Packing group	I
Description	UN1093, Acrylonitrile, stabilized, 3 (6.1), I, (C/E), Environmentally Hazardous
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	386, 676
Classification code	FT1
Tunnel restriction code	(C/E)

ADN

14.1 UN number or ID number	UN1093
14.2 UN proper shipping name	Acrylonitrile, stabilized
14.3 Transport hazard class(es)	3
Subsidiary hazard class	6.1
14.4 Packing group	I
Description	UN1093, Acrylonitrile, stabilized, 3 (6.1), I, Environmentally Hazardous
14.5 Environmental hazard	Yes
14.6 Special precautions for user	
Special Provisions	386, 676, 802
Classification code	FT1
Ventilation	VE01, VE02
Equipment Requirements	PP, EP, EX, TOX, A

SECTION 15: Regulatory information

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

National regulations

Germany

Water hazard class (WGK)	strongly hazardous to water (WGK 3)
Chemical Prohibition Ordinance (ChemVerbotsV)	This product is subject to requirements and restrictions regarding handling and delivery

TA Luft (German Air Pollution Control Regulation)

Chemical name	Number	Class
acrylonitrile	5.2.7.1.1	Class II

TRGS 905 Not applicable

Netherlands
Carcinogenic, mutagenic and reproductive toxic effects

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
acrylonitrile - 107-13-1	Present	-	-

Switzerland
Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Not applicable
Storage of Hazardous Material SC 6.1
WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Class A
Major Accidents Ordinance SR 814.012 Not applicable

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
acrylonitrile - 107-13-1	28 75	

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors
Not applicable

Persistent Organic Pollutants
Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
H1 - ACUTE TOXIC
H2 - ACUTE TOXIC
P5a - FLAMMABLE LIQUIDS
P5b - FLAMMABLE LIQUIDS
P5c - FLAMMABLE LIQUIDS
E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 2024/590
Not applicable

International Inventories

TSCA	Company, to the best of its ability, has confirmed that the chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb 2019, as amended Feb 2021."
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. **Chemical safety assessment**

Chemical Safety Report A Chemical Safety Assessment is not required for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15
H225 - Highly flammable liquid and vapour
H301 - Toxic if swallowed
H310 - Fatal in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage
H330 - Fatal if inhaled
H335 - May cause respiratory irritation
H350 - May cause cancer
H411 - Toxic to aquatic life with long lasting effects
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P321 - Specific treatment (see supplemental first aid instructions on this label)
P330 - Rinse mouth
P405 - Store locked up
P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable
P262 - Do not get in eyes, on skin, or on clothing
P280 - Wear protective gloves, protective clothing, eye protection and face protection
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
P310 - Immediately call a POISON CENTER or doctor
P321 - Specific treatment (see supplemental instructions on the administration of antidotes on this label)
P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse
P260 - Do not breathe dust, fume, gas, mist, vapors and spray
P271 - Use only outdoors or in a well-ventilated area
P284 - In case of inadequate ventilation wear respiratory protection
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash it before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P261 - Avoid breathing dust, fume, gas, mist, vapors and spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P312 - Call a POISON CENTER or doctor if you feel unwell
P273 - Avoid release to the environment
P391 - Collect spillage
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground and bond container and receiving equipment
P241 - Use explosion-proof electrical, ventilating and lighting equipment
P242 - Use non-sparking tools
P243 - Take action to prevent static discharges
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P403 + P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to industrial incineration plant

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
AIDII	Italian Association of Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DFG	German Research Foundation
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
EWC	European Waste Codes
GHS	Globally Harmonized System
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
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MAL	Measuring Technical Hygienic Air Needs
MARPOL	International Convention for the Prevention of Pollution from Ships
MDLPS	Ministry of Labour and Social Policy
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration

NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
Sen+	Sensitiser
Sk*	Skin designation
**	Hazard Designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method

Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date N/A
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
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End of Safety Data Sheet