

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



NITRALZ® 2-Chlorobenzonitrile

Version 6.0 / REG_EU
Revision Date: 26.10.2018

Specification: 132461
Material no.:

Date of first issue: 26.10.2018
Print Date: 27.10.2018

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

1.1 Product identifier

Trade name : NITRALZ® 2-Chlorobenzonitrile
Registration number : 01-2119852671-36-0000
CAS-No. : 873-32-5
Index-No. : 608-013-00-9
EC-No. : 212-836-5

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

Use of the Sub-
stance/Mixture : Raw material for industrial use

1.3 Details of the supplier of the safety data sheet

Company : AlzChem Trostberg GmbH
Dr.-Albert-Frank-Str. 32
83308 Trostberg, Germany
Telephone : +49 8621 86-3351
E-mail address of person
responsible for the SDS : alz-pst@alzchem.com

1.4 Emergency telephone number

Emergency telephone num-
ber : +49 8621 86-2776
AlzChem Trostberg GmbH, Fire Brigade

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms :



Signal word : Warning

Hazard statements :
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : 2-Chlorobenzonitrile
Index-No. : 608-013-00-9

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
2-chlorobenzonitrile	873-32-5 212-836-5	>= 99

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Seek medical advice in case of symptoms caused by eye or skin contact, inhalation or swallowing. Helpers must protect themselves and bring victims out of hazard area. Remove contaminated or saturated clothing.
- If inhaled : Move to fresh air.
- In case of skin contact : Wash off with plenty of water and soap. Following contact with hot product, cool quickly with cold water until pain ceases. Do not remove congealed product from the skin.
- In case of eye contact : Immediately flush eye(s) with plenty of water. Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : To the best of our knowledge, experiences about acute systemic health effects in human beings are not available.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray, foam, CO₂, dry powder.

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products : nitrous gases
Hydrocyanic acid (HCN)
hydrogen chloride (HCl)
Carbon oxides

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Wear personal protective equipment; see section 8. Avoid dust formation.

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Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : Product or extinguishing water with product must not be allowed to enter soil, sewers or natural bodies of water.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.
Melt:
Allow to solidify, use mechanical handling equipment.
Avoid dust formation.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For professional use only.
Provide sufficient ventilation and exhaust at the workplace.
Avoid dust formation.
Do not allow individual / bulk containers to stand open

Advice on protection against fire and explosion : If dusts develop, explosive dust/air mixtures may form. When handling hot molten mass: Vapours can form explosive mixtures with air. Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.

Hygiene measures : Do not breathe vapours/dust. Avoid contact with skin, eyes and clothing. Take off clothing and shoes contaminated with product. Clean before reuse. Do not eat, drink or smoke while working. Wash hands, and/or face before breaks and when workday is finished. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep tightly closed.

Storage class (TRGS 510) : 11, Combustible Solids

Packaging material : Suitable material: polyethylene, Polypropylene, Steel drum with polyethylene inliner, Melt: stainless steel

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7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Personal protective equipment

- Eye protection : Safety glasses
When handling hot molten mass:
Tightly fitting safety goggles
- Hand protection
- Material : Chloroprene, Recommendation: Camapren 722
Break through time : 480 min
Glove thickness : 0,6 mm
Manufacturer : Kächele-Cama Latex GmbH (KCL), Germany
- Material : Nitrile rubber, Recommendation: Camatril 730
Break through time : 480 min
Glove thickness : 0,4 mm
Manufacturer : Kächele-Cama Latex GmbH (KCL), Germany
- Remarks : When handling hot material, use heat resistant gloves.
- Skin and body protection : Protective clothing
- Respiratory protection : Do not inhale gases, vapours, aerosols or dust - use respiratory protection equipment.
Respirator with ABEK-P3 combination filter

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : solid
- Colour : yellowish
- Odour : stinging, bitter almond
- pH : 7
(as aqueous solution)
- Melting point/range : 40 - 43 °C
- Boiling point/boiling range : 232 °C
(1.013 hPa)
- Flash point : 122 °C
- Vapour pressure : 0,06 hPa (20 °C)

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	1,33 hPa (68 - 72 °C)
Density	: 1,184 g/cm ³ (50 °C)
Solubility(ies)	
Water solubility	: insoluble (20 °C)
Solubility in other solvents	: 165 g/l (20 °C) Solvent: toluene
	60 g/l (20 °C) Solvent: Ethanol

9.2 Other information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

|| See section 10.3

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reactions known.

10.4 Conditions to avoid

Conditions to avoid : When handling hot molten mass:
Keep away from sources of ignition - No smoking.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

|| Hazardous decomposition products formed under fire conditions.
see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Assessment: Harmful if swallowed.

Acute dermal toxicity : Assessment: Harmful in contact with skin.

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Components:

2-chlorobenzonitrile:

- Acute oral toxicity : LD50 (rat): 396 mg/kg
Assessment: Harmful if swallowed.
Remarks: Own test result.
- Acute inhalation toxicity : LC0 (rat): > 0,44 mg/l
Exposure time: 4 h
Remarks: the maximum dose attainable under experimental conditions no fatalities
Own test result.
- Acute dermal toxicity : Assessment: Harmful in contact with skin.
Remarks: Exposure to the substance not as a solid, but e.g. in solution may endanger dermal absorption and toxic effects.

Skin corrosion/irritation

Components:

2-chlorobenzonitrile:

- Species : Rabbit
Method : OECD Guide-line 404
Result : No skin irritation
Remarks : Own test result.

Serious eye damage/eye irritation

Product:

- Assessment : Causes serious eye irritation.

Components:

2-chlorobenzonitrile:

- Species : Rabbit
Assessment : Causes serious eye irritation.
Method : OECD Guide-line 405
Result : slightly irritating
Remarks : Own study, IUCLID

Respiratory or skin sensitisation

Components:

2-chlorobenzonitrile:

- Remarks : no data available

Germ cell mutagenicity

Components:

2-chlorobenzonitrile:

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Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test

Carcinogenicity

Components:

2-chlorobenzonitrile:

Remarks : No data available

STOT - single exposure

Components:

2-chlorobenzonitrile:

Remarks : no data available

STOT - repeated exposure

Components:

2-chlorobenzonitrile:

Remarks : no data available

Aspiration toxicity

Components:

2-chlorobenzonitrile:

No data available

Further information

Product:

Remarks : No additional toxicological data are available.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

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

Components:

2-chlorobenzonitrile:

Toxicity to fish : LC50 (Leuciscus idus): 55 mg/l
Exposure time: 48 h
Method: DIN 38412
Remarks: Own test result.

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NOEC : 10 mg/l
Exposure time: 48 h
Method: DIN 38412
Remarks: Own test result.

Toxicity to microorganisms : EC10 (Pseudomonas putida): 43 mg/l
Remarks: Own test result.

12.2 Persistence and degradability

Components:

2-chlorobenzonitrile:

Biodegradability : Method: OECD 301
Remarks: Not readily biodegradable.

12.3 Bioaccumulative potential

Components:

2-chlorobenzonitrile:

Partition coefficient: n-octanol/water : log Pow: 2,2

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

12.6 Other adverse effects

Product:

Additional ecological information : No further ecotoxicological data are available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : Must be brought to an adequate waste treatment facility, in conformity with applicable waste disposal regulations.
- Contaminated packaging : Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

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SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Remarks : Not classified as dangerous in the meaning of transport regulations.

ADR
Remarks : Not regulated as a dangerous good
: Not classified as dangerous in the meaning of transport regulations.

RID
Remarks : Not regulated as a dangerous good
: Not classified as dangerous in the meaning of transport regulations.

IMDG
Remarks : Not regulated as a dangerous good
: Not classified as dangerous in the meaning of transport regulations.

IATA (Cargo)
Remarks : Not regulated as a dangerous good
: Not classified as dangerous in the meaning of transport regulations.

IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.
When transporting as a molten mass:
Dangerous good (with special safety data sheet).

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

Not applicable for product as supplied.

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SECTION 15: Regulatory information

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

15.2 Chemical safety assessment

|| No substance safety assessment is required for this product (<10t).

SECTION 16: Other information

Full text of other abbreviations

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; AICS - Australian Inventory of Chemical Substances; 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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