

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

### **1.1 Product identifier**

**Trade name** 4-(2-Hydroxyethyl)benzonitrile

**Stock number:** 41283

**CAS Number:**

69395-13-7

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

**Identified use:** SU24 Scientific research and development

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

#### **Manufacturer/Supplier:**

Thermo Fisher (Kandel) GmbH

Zeppelinstr. 7b

76185 Karlsruhe / Germany

Tel: +49 (0) 721 84007 280

Fax: +49 (0) 721 84007 300

Email: tech@alfa.com

www.alfa.com

**Informing department:** Product safety Tel + +049 (0) 7275 988687-0

### **1.4 Emergency telephone number:**

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

## **SECTION 2: Hazards identification**

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

Classification according to Regulation (EC) No 1272/2008



Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

**Other hazards that do not result in classification** No information known.

### **2.2 Label elements**

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.

#### **Hazard pictograms**



GHS07

#### **Signal word** Warning

#### **Hazard statements**

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

#### **Precautionary statements**

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

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

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P322 Specific measures (see on this label).

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### **2.3 Other hazards**

#### **Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

### **3.1 Substances**

#### **CAS# Designation:**

69395-13-7 4-(2-Hydroxyethyl)benzonitrile

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

### **4.1 Description of first aid measures**

#### **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Seek immediate medical advice.

#### **After skin contact**

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

**After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

**After swallowing** Seek medical treatment.

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

Harmful if swallowed.

Harmful if inhaled.

Harmful in contact with skin.

**4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

**Suitable extinguishing agents** CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NO<sub>x</sub>)

## Trade name 4-(2-Hydroxyethyl)benzonitrile

(Contd. of page 1)

### 5.3 Advice for firefighters

#### Protective equipment:

Wear self-contained breathing apparatus.  
Wear full protective suit.

## SECTION 6: Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or water bodies.

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

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

**Prevention of secondary hazards:** No special measures required.

### 6.4 Reference to other sections

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

**Information about protection against explosions and fires:** No information known.

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

#### Storage

Requirements to be met by storerooms and containers: No special requirements.

Information about storage in one common storage facility: Store away from oxidising agents.

#### Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

### 7.3 Specific end use(s)

No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

### 8.1 Control parameters

#### Components with critical values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

#### Additional information: No data

### 8.2 Exposure controls

#### Personal protective equipment

##### General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use breathing protection with high concentrations.

#### Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

#### Protection of hands:

Check protective gloves prior to each use for their proper condition.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

#### Material of gloves

Impervious gloves

**Eye protection:** Safety glasses

**Body protection:** Protective work clothing.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form: Powder  
Odour: Not determined  
Odour threshold: Not determined.

pH-value: Not applicable.

##### Change in condition

Melting point/Melting range: Not determined  
Boiling point/Boiling range: 116-118 °C (0,5mm)  
Sublimation temperature / start: Not determined  
Inflammability (solid, gaseous) Not determined.  
Ignition temperature: Not determined  
Decomposition temperature: Not determined  
Self-inflammability: Not determined.

**Danger of explosion:** Not determined.

##### Critical values for explosion:

Lower: Not determined  
Upper: Not determined

Steam pressure: Not applicable.

Density: Not determined

Relative density: Not determined.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

##### Solubility in / Miscibility with

Water: Not determined

Partition coefficient (n-octanol/water): Not determined.

##### Viscosity:

dynamic: Not applicable.

kinematic: Not applicable.

(Contd. on page 3)

DE

## Trade name 4-(2-Hydroxyethyl)benzonitrile

(Contd. of page 2)

## 9.2 Other information

No further relevant information available.

**SECTION 10: Stability and reactivity**

10.1 Reactivity No information known.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No decomposition if used and stored according to specifications.

10.4 Conditions to avoid Reacts with strong oxidising agents

10.5 Incompatible materials: Oxidising agents

10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

**SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

## Acute toxicity:

Harmful if inhaled.

Harmful in contact with skin.

Harmful if swallowed.

Danger by skin resorption.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effect known.

Germ cell mutagenicity: No effects known.

Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: No effects known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**SECTION 12: Ecological information**

## 12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

## Additional ecological information:

## General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.

Avoid transfer into the environment.

## 12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

**SECTION 13: Disposal considerations**

## 13.1 Waste treatment methods

## Recommendation

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Consult state, local or national regulations for proper disposal.

## Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

## UN-Number

ADR, IMDG, IATA

UN3439

## 14.2 UN proper shipping name

ADR  
IMDG, IATA  
3439 NITRILES, SOLID, TOXIC, N.O.S. (4-(2-Hydroxyethyl)benzonitrile)  
NITRILES, SOLID, TOXIC, N.O.S. (4-(2-Hydroxyethyl)benzonitrile)

## 14.3 Transport hazard class(es)

ADR

Class  
Label  
IMDG, IATA6.1 (T2) Toxic substances.  
6.1Class  
Label6.1 Toxic substances.  
6.1Packing group  
ADR, IMDG, IATA

III

## 14.5 Environmental hazards:

Not applicable.

## 14.6 Special precautions for user

Warning: Toxic substances.

Kemler Number:

60

EMS Number:

F-A,S-A

## 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

(Contd. on page 4)  
DE

**Trade name 4-(2-Hydroxyethyl)benzonitrile**

(Contd. of page 3)

**Transport/Additional information:**

**ADR**

**Excepted quantities (EQ):**

**Limited quantities (LQ):**

**Transport category**

**Tunnel restriction code**

E1

5 kg

2

E

**UN "Model Regulation":**

UN3439, NITRILES, SOLID, TOXIC, N.O.S. (4-(2-Hydroxyethyl)benzonitrile), 6.1, III

**SECTION 15: Regulatory information**

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

**Australian Inventory of Chemical Substances** Substance is not listed.

**Standard for the Uniform Scheduling of Medicines and Poisons** Substance is not listed.

**National regulations**

**Information about limitation of use:**

For use only by technically qualified individuals.

Employment restrictions concerning young persons must be observed.

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**Other regulations, limitations and prohibitive regulations**

**ELINCS (European List of Notified Chemical Substances)** Substance is not listed.

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.** Substance is not listed.

**The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**

Substance is not listed.

**Annex XIV of the REACH Regulations (requiring Authorisation for use)** Substance is not listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)

Acute Tox. 4: Acute toxicity, Hazard Category 4

DE