1 Identification

Product identifier

Product name: 2-Aminobenzonitrile

Stock number: A12286
CAS Number: 1885-29-6
EC number: 217-549-9

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

Identified use: SU24  Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-543-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

Hazard pictograms

GHS07

Signal word Warning

Hazard statements
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves and/or eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
D1B - Toxic material causing immediate and serious toxic effects
D2B - Toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

Health (acute effects) = 2
Flammability = 1
Physical Hazard = 1

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:
1885-29-6 2-Aminobenzonitrile

Identification number(s):
EC number: 217-549-9

(Contd. on page 2)
4 First-aid measures

Description of first aid measures

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact
Immediately 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 a doctor.

After swallowing
Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed
No further relevant information available.

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

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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
Hydrogen cyanide (HCN)
Nitrogen oxides (NOx)

Advice for firefighters

Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

Environmental precautions:
Do not allow product to reach sewage system or any water course.

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.

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 disposal information.

7 Handling and storage

Handling

Precautions for safe handling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.

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

Conditions for safe storage, including any incompatibilities

Storage

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

Information about storage in one common storage facility:
Do not store together with acids.
Store away from strong bases.
Store away from oxidizing agents.
Store away from reducing agents.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

Specific end use(s)
No further relevant information available.

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.

Control parameters

Components with limit 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

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment:
Use suitable respirator when high concentrations are present.

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:

Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Material of gloves
Nitric rubber, NBR

Penetration time of glove material (in minutes) 480

Glove thickness 0.11 mm
**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance:</strong></td>
<td>Crystalline solid</td>
</tr>
<tr>
<td><strong>Form:</strong></td>
<td>Cream to pale brown</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**pH-value:** Not applicable.

**Change in condition**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Melting point/Melting range:</strong></td>
<td>45-49 °C (113-120 °F)</td>
</tr>
<tr>
<td><strong>Boiling point/Boiling range:</strong></td>
<td>286 °C (547 °F)</td>
</tr>
<tr>
<td><strong>Sublimation temperature / start:</strong></td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Flash point:** 145 °C (293 °F)

**Flammability (solid, gaseous):** Not determined.

**Ignition temperature:** Not determined.

**Decomposition temperature:** Not determined.

**Auto igniting:** Not determined.

**Danger of explosion:** Not determined.

**Explosion limits:**

- **Lower:** Not determined
- **Upper:** Not determined

**Vapor pressure:** Not applicable.

**Density:** Not determined.

**Relative density:** Not determined.

**Vapor density:** Not applicable.

**Evaporation rate:** Not applicable.

**Solubility in / Miscibility with Water:** Insoluble

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

**Viscosity:**

- **dynamic:** Not applicable.
- **kinematic:** Not applicable.

**Other information:** No further relevant information available.

**10 Stability and reactivity**

**Reactivity:** No information known.

**Chemical stability:** Stable under recommended storage conditions.

**Thermal decomposition / conditions to be avoided:** Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions:** React with strong oxidizing agents

**Conditions to avoid:** No further relevant information available.

**Incompatible materials:**

- Acids
- Bases
- Oxidizing agents
- Reducing agents

**Hazardous decomposition products:**

- Carbon monoxide and carbon dioxide
- Hydrogen cyanide
- Nitrogen oxides

**11 Toxicological information**

**Information on toxicological effects**

**Acute toxicity:**

- Harmful if inhaled.
- Harmful in contact with skin.
- Harmful if swallowed.

**Danger through skin absorption:**

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

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

**Skin irritation or corrosion:** Causes skin irritation.

**Eye irritation or corrosion:** Causes serious eye irritation.

**Sensitization:** May cause an allergic skin reaction.

**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:** May cause respiratory irritation.

**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.

**12 Ecological information**

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**PERSISTENCE and degradability**

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

**Additional ecological information:**

**General notes:**

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

**Danger to drinking water if even small quantities leak into the ground:**

Avoid transfer into the environment.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.
13 Disposal considerations

Waste treatment methods
Recommendation: Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number
DOT, IMDG, IATA  UN3439

UN proper shipping name
DOT  Nitriles, solid, toxic, n.o.s. (2-Aminobenzonitrile)
IMDG, IATA  NITRILES, SOLID; TOXIC, N.O.S. (2-Aminobenzonitrile)

Transport hazard class(es)
DOT
Class 6.1 Toxic substances.
Label 6.1

IMDG, IATA
Class 6.1 Toxic substances.
Label 6.1

Packing group
DOT, IMDG, IATA  III

Environmental hazards:
Not applicable.

Special precautions for user
Warning: Toxic substances
EMS Number: F-A,S-A

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:
DOT
Marine Pollutant (DOT): No

UN "Model Regulation": UN3439, Nitriles, solid, toxic, n.o.s. (2-Aminobenzonitrile), 6.1, III

15 Regulatory information

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

GHS label elements
The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS).

Hazard pictograms

Signal word Warning

Hazard statements
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

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P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings) Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations
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.

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

Date of preparation / last revision 11/23/2015 / -

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)
- IMS: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- 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)
- IARC: International Agency for Research on Cancer
- EPA: Environmental Protection Agency (USA)