

**SAFETY DATA SHEET**

Creation Date 16-Nov-2010

Revision Date 14-Feb-2020

Revision Number 2

**1. Identification**

**Product Name** Bromoacetonitrile

**Cat No. :** A13933

**CAS-No** 590-17-0  
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**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**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                             |              |
|---------------------------------------------|--------------|
| Acute oral toxicity                         | Category 3   |
| Acute dermal toxicity                       | Category 3   |
| Acute Inhalation Toxicity - Dusts and Mists | Category 3   |
| Skin Corrosion/Irritation                   | Category 1 B |
| Serious Eye Damage/Eye Irritation           | Category 1   |

**Label Elements****Signal Word**

Danger

**Hazard Statements**

Causes severe skin burns and eye damage  
Toxic if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

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

**Skin**

Wash contaminated clothing before reuse  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

Rinse mouth  
Do NOT induce vomiting

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component         | CAS-No   | Weight % |
|-------------------|----------|----------|
| Bromoacetonitrile | 590-17-0 | >95      |

### 4. First-aid measures

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. 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. Immediate medical attention is required.

**Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**

Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should

## Notes to Physician

be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation  
Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** > 110 °C / > 230 °F

**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen halides.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
3

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Wear self-contained breathing apparatus and protective suit. Do not let this chemical enter the environment.

## 7. Handling and storage

**Handling** Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Wash hands before breaks and immediately after handling the product.

**Storage** Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Keep away from heat, sparks and flame.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component         | ACGIH TLV | OSHA PEL                           | NIOSH IDLH                 | Mexico OEL (TWA) |
|-------------------|-----------|------------------------------------|----------------------------|------------------|
| Bromoacetonitrile |           | (Vacated) TWA: 5 mg/m <sup>3</sup> | IDLH: 25 mg/m <sup>3</sup> |                  |

Legend

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|                                               |                                        |
|-----------------------------------------------|----------------------------------------|
| <b>Physical State</b>                         | Liquid                                 |
| <b>Appearance</b>                             | Clear                                  |
| <b>Odor</b>                                   | No information available               |
| <b>Odor Threshold</b>                         | No information available               |
| <b>pH</b>                                     | No information available               |
| <b>Melting Point/Range</b>                    | No data available                      |
| <b>Boiling Point/Range</b>                    | 148 - 150 °C / 298 - 302 °F @ 760 mmHg |
| <b>Flash Point</b>                            | > 110 °C / > 230 °F                    |
| <b>Evaporation Rate</b>                       | No information available               |
| <b>Flammability (solid,gas)</b>               | Not applicable                         |
| <b>Flammability or explosive limits</b>       |                                        |
| <b>Upper</b>                                  | No data available                      |
| <b>Lower</b>                                  | No data available                      |
| <b>Vapor Pressure</b>                         | No information available               |
| <b>Vapor Density</b>                          | No information available               |
| <b>Specific Gravity</b>                       | 1.720                                  |
| <b>Solubility</b>                             | No information available               |
| <b>Partition coefficient; n-octanol/water</b> | No data available                      |
| <b>Autoignition Temperature</b>               | No information available               |
| <b>Decomposition Temperature</b>              | No information available               |
| <b>Viscosity</b>                              | No information available               |
| <b>Molecular Formula</b>                      | C2 H2 Br N                             |
| <b>Molecular Weight</b>                       | 119.95                                 |

## 10. Stability and reactivity

|                                         |                                                                                                  |
|-----------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                       |
| <b>Stability</b>                        | Stable under normal conditions.                                                                  |
| <b>Conditions to Avoid</b>              | Incompatible products.                                                                           |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents                      |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen halides |

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

**Toxicologically Synergistic Products** No information available

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

**Irritation** Causes burns by all exposure routes

**Sensitization** No information available

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

| Component         | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|----------|------------|------------|------------|------------|------------|
| Bromoacetonitrile | 590-17-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

UN-No UN2922  
 Proper Shipping Name Corrosive liquid, toxic, n.o.s.  
 Technical Name Bromoacetonitrile  
 Hazard Class 8  
 Subsidiary Hazard Class 6.1  
 Packing Group II

**TDG**

UN-No UN2922  
 Proper Shipping Name Corrosive liquid, toxic, n.o.s.  
 Hazard Class 8  
 Subsidiary Hazard Class 6.1  
 Packing Group II

**IATA**

UN-No UN2922  
 Proper Shipping Name Corrosive liquid, toxic, n.o.s.  
 Hazard Class 8  
 Subsidiary Hazard Class 6.1  
 Packing Group II

**IMDG/IMO**

UN-No UN2922  
 Proper Shipping Name Corrosive liquid, toxic, n.o.s.  
 Hazard Class 8  
 Subsidiary Hazard Class 6.1  
 Packing Group II

## 15. Regulatory information

**United States of America Inventory**

| Component         | CAS-No   | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|-------------------|----------|------|-----------------------------------------------|-----------------------------|
| Bromoacetonitrile | 590-17-0 | -    | -                                             | -                           |

**Legend:**

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component         | CAS-No   | DSL | NDL | EINECS    | PICCS | ENCS | AICS | IECSC | KECL     |
|-------------------|----------|-----|-----|-----------|-------|------|------|-------|----------|
| Bromoacetonitrile | 590-17-0 | -   | -   | 209-672-1 | -     | -    | -    | -     | KE-03614 |

**U.S. Federal Regulations****SARA 313**

| Component         | CAS-No   | Weight % | SARA 313 - Threshold Values % |
|-------------------|----------|----------|-------------------------------|
| Bromoacetonitrile | 590-17-0 | >95      | 1.0                           |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

| Component | CWA - Hazardous | CWA - Reportable | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-----------|-----------------|------------------|------------------------|---------------------------|
|-----------|-----------------|------------------|------------------------|---------------------------|

|                   | Substances | Quantities |   |   |
|-------------------|------------|------------|---|---|
| Bromoacetonitrile | -          | -          | X | X |

**Clean Air Act** Not applicable

| Component         | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|-------------------|-----------|-------------------------|-------------------------|
| Bromoacetonitrile | X         |                         | -                       |

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Bromoacetonitrile | -             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Health, Safety and Environmental Department  
 Email: tech@alfa.com  
 www.alfa.com

**Creation Date** 16-Nov-2010  
**Revision Date** 14-Feb-2020  
**Print Date** 14-Feb-2020  
**Revision Summary** SDS authoring systems update, replaces ChemGes SDS No. 590-17-0/2.

**Disclaimer**

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

**End of SDS**