

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 22.07.2010

Revision: 22.07.2010

1 Identification of substance**Product details****Trade name****2-Bromo-4-fluorophenyl isothiocyanate****Stock number:**

A19464

Manufacturer/Supplier:Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com**Informing department:**

Product safety department.

Emergency information:Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240**2 Hazards identification****Hazard designation:**

C Corrosive

Information pertaining to particular dangers for man and environmentR 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 34 Causes burns.**GHS label elements****Danger**

H314 - Causes severe skin burns and eye damage.

**Warning**H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H332 - Harmful if inhaled.**Prevention:****Response:**P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.**Storage:****Disposal:****3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)**2-Bromo-4-fluorophenyl isothiocyanate (CAS# 175205-35-3):
100%**4 First aid measures****General information**Instantly remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
Rinse opened eye for several minutes under running water. Then consult doctor.
Do not induce vomiting; instantly call for medical help.
Seek immediate medical advice.**After inhalation****After skin contact****After eye contact****After swallowing****5 Fire fighting measures****Suitable extinguishing agents****For safety reasons unsuitable extinguishing agents****Special hazards caused by the material, its products of combustion or flue gases:**CO₂, sand, extinguishing powder. Do not use water.

Water.

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Sulphur oxides (SO_x)
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
Hydrogen bromide (HBr)**Protective equipment:**Wear self-contained breathing apparatus.
Wear full protective suit.**6 Accidental release measures****Person-related safety precautions:**Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.**Additional information:****7 Handling and storage****Handling****Information for safe handling:**Handle under dry protective gas.
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:**

Keep ignition sources away - Do not smoke.

Storage Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:Store away from water.
Store away from oxidizing agents.**Further information about storage conditions:**

Store under dry inert gas.

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This product is moisture sensitive.
 Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.
 Protect from humidity and keep away from water.
 Store in a locked cabinet or with access restricted to technical experts or their assistants.

8 Exposure controls and 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.

Components with critical values that require monitoring at the workplace:

Not required.
 No data

Additional information:

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.

Breathing equipment:

Use breathing protection with high concentrations.

Protection of hands:

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

Material of gloves

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.

Impervious gloves

Penetration time of glove material

Not determined

Eye protection:

Safety glasses

Face protection

Body protection:

Protective work clothing.

9 Physical and chemical properties:

General Information

Form: Crystalline
 Colour: Whitish
 Smell: Pungent

Change in condition

Melting point/Melting range: 36-38°C

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Flash point:

Not applicable

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Danger of explosion:

Product is not explosive.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure:

Not determined

Density

Not determined

Solubility in / Miscibility with

Water: Hydrolyzes

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Materials to be avoided:

Water/moisture

Alcohols

Amines

Oxidizing agents

No dangerous reactions known

Carbon monoxide and carbon dioxide

Sulphur oxides (SOx)

Nitrogen oxides (NOx)

Hydrogen bromide

Hydrogen cyanide (prussic acid)

Dangerous reactions:

Dangerous products of decomposition:

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin:

on the eye:

Corrosive effect on skin and mucous membranes.

Strong corrosive effect.

Lachrymatory effect.

Sensitization:

No sensitizing effect known.

Additional toxicological information:

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

Danger by skin resorption.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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

12 Ecological information:

Additional ecological information:

General notes:

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

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

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

Recommendation

Consult state, local or national regulations for proper disposal.

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Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



ADR/RID-GGVS/E Class: 8 (CT2) Corrosive substances.
 Kemler Number: 86
 UN-Number: 2923
 Packaging group: III
 Label: 8+6.1
 Designation of goods: 2923 CORROSIVE SOLID, TOXIC, N.O.S. (2-Bromo-4-fluorophenyl isothiocyanate)
 Limited quantities (LQ): LQ24
 Transport category: 3
 Tunnel restriction code: E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 8
 UN Number: 2923
 Label: 8+6.1
 Packaging group: III
 EMS Number: F-A,S-B
 Marine pollutant: No
 Correct technical name: CORROSIVE SOLID, TOXIC, N.O.S. (2-Bromo-4-fluorophenyl isothiocyanate)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 8
 UN/ID Number: 2923
 Label: 8+6.1
 Packaging group: III
 Correct technical name: CORROSIVE SOLID, TOXIC, N.O.S. (2-Bromo-4-fluorophenyl isothiocyanate)

UN "Model Regulation":

UN2923, CORROSIVE SOLID, TOXIC, N.O.S., 8 (6.1), III

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



C Corrosive

Risk phrases:

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 34 Causes burns.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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.

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 data specification sheet: Health, Safety and Environmental Department.

Contact: Zachariah Holt

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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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