

## Chemical Safety Data Sheet MSDS / SDS

**3,4-Difluorophenylboronic acid**

Revision Date:2026-05-31 Revision Number:1

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

Product name : 3,4-Difluorophenylboronic acid  
CBnumber : CB0383587  
CAS : 168267-41-2  
EINECS Number : 736-978-8  
Synonyms : 3,4-Difluorophenylboronic acid,3,4-difluorobenzeneboronic acid

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

**Precautionary statements**

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P405 Store locked up.

**Hazard statements**

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

## SECTION 3: Composition/information on ingredients

### Substance

|              |                                                                  |
|--------------|------------------------------------------------------------------|
| Product name | : 3,4-Difluorophenylboronic acid                                 |
| Synonyms     | : 3,4-Difluorophenylboronic acid,3,4-difluorobenzeneboronic acid |
| CAS          | : 168267-41-2                                                    |
| EC number    | : 736-978-8                                                      |
| MF           | : C <sub>6</sub> H <sub>5</sub> BF <sub>2</sub> O <sub>2</sub>   |
| MW           | : 157.91                                                         |

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## SECTION 4: First aid measures

### If inhaled

After inhalation: fresh air.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Specific hazards during fire fighting

Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

## Hazardous combustion products

Carbon oxides Hydrogen fluoride Borane/boron oxides

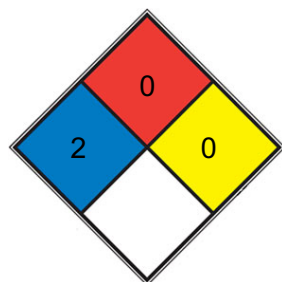
## Specific extinguishing methods

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

## NFPA 704



**HEALTH 2** Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

**FIRE 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

**SPEC.**  
**HAZ.**

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## SECTION 7: Handling and storage

## Handling

For precautions see section 2.2.

## Storage

### Further information on storage conditions

Tightly closed. Dry.

### Storage class

11, Combustible Solids

### Recommended storage temperature

Recommended storage temperature see product label.

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Recommended Filter type

Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses

#### Hand protection

##### Material

Nitrile rubber

##### Break through time

480 min

##### Glove thickness

0.11 mm

##### Protective index

Full contact

##### Manufacturer

KCL 741 L

**Material**

Nitrile rubber

**Break through time**

480 min

**Glove thickness**

0.11 mm

**Protective index**

Splash contact

**Manufacturer**

KCL 741 L

**Remarks**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Hygiene measures**

Change contaminated clothing. Wash hands after working with substance.

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## SECTION 9: Physical and chemical properties

**Information on basic physicochemical properties**

solid

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**Color**

White

**Odor**

No data available

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/ range**

305 - 310 °C

Method: lit.

**Boiling point/boiling range**

265.4±50.0 °C(Predicted)

**Flash point**

No data available

**Evaporation rate**

No data available

**Flammability (solid, gas)**

No data available

**Flammability (liquids)**

No data available

**Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

1.35±0.1 g/cm<sup>3</sup>(Predicted)

**Density**

1.35±0.1 g/cm<sup>3</sup>(Predicted)

**Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

No data available

**Oxidizing properties**

No data available

**Molecular weight**

157.91 g/mol

**Particle characteristics Particle size**

No data available

**Solubility**

soluble in Methanol

**Physical state**

Powder

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## SECTION 10: Stability and reactivity

**Reactivity**

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

Violent reactions possible with: Strong oxidizing agents

**Conditions to avoid**

no information available

**Incompatible materials**

No data available

**Hazardous decomposition products**

In the event of fire: see section 5

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## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

### Skin corrosion/irritation

Remarks: No data available

### Serious eye damage/eye irritation

Remarks: No data available

### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

### Germ cell mutagenicity

Classified based on available data. For more details, see section 2

### Carcinogenicity

Classified based on available data. For more details, see section 2

### Reproductive toxicity

Classified based on available data. For more details, see section 2

### Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

### Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

### Aspiration hazard

Classified based on available data. For more details, see section 2

## 11.2 Additional Information

Classified based on available data. For more details, see section 2

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## SECTION 12: Ecological information

### Ecotoxicity

No data available

### Persistence and degradability

No data available

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Other adverse effects

No data available



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## SECTION 13: Disposal considerations

### Disposal methods

#### Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

### International Regulations

#### IATA-DGR

UN/ID No. : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Packing instruction (cargo aircraft) : Not applicable

Packing instruction (passenger aircraft) : Not applicable

#### IMDG-Code

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : no

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### JT/T 617

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Environmentally hazardous : no

### **Special precautions for user**

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

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## **SECTION 15: Regulatory information**

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals and it does not meet the definition of hazardous chemicals and its principles of determination.

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### **National regulatory information**

#### **Regulations on Safety Management of Hazardous Chemicals**

##### **Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)**

Not listed

##### **Hazardous Chemicals for Priority Management**

Not listed under SAWS

##### **Regulations on Labour Protection in Workplaces where Toxic Substances are Used**

##### **Catalogue of Highly Toxic Chemicals**

Not listed

##### **Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

##### **China Severely Restricted Toxic Chemicals for Import and Export**

Not listed

##### **Measures on the Environmental Administration of New Chemical Substances Registration**

##### **Registration/Notification number**

B1A222222955 B1A222223734

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## **SECTION 16: Other information**

### **Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight  
 CMR - Carcinogen, Mutagen or Reproductive Toxicant  
 DIN -Standard of the German Institute for Standardisation  
 DSL - Domestic SubstancesList (Canada)  
 ECx - Concentration associated with x% response  
 ELx - Loading rate associated with x% response  
 EmS - Emergency Schedule  
 ENCS - Existing and NewChemical Substances (Japan)  
 ErCx - Concentration associated with x% growth rate response  
 ERG - Emergency Response Guide  
 GHS - Globally Harmonised System  
 GLP - Good Laboratory Practice  
 IARC - International Agency for Research on Can- cer  
 IATA - International Air Transport Association  
 IBC - International Code for theConstruction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
 IC50 -Half maximal inhibitory concentration  
 ICAO - International Civil Aviation Organiza- tion  
 IECSC - Inventory of Existing Chemical Substances in China  
 IMDG - Interna- tional Maritime Dangerous Goods  
 IMO - International Maritime Organisation  
 ISHL -Industrial Safety and Health Law (Japan)  
 ISO - International Organisation forStandardisation  
 KECI - Korea Existing Chemicals Inventory  
 LC50 - Lethal Concen- tration 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 Pol- lution from Ships  
 MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods  
 n.o.s. - Not Otherwise Specified  
 Nch - Chilean Norm  
 NO(A)EC - No Observed (Adverse) Effect Concentration  
 NO(A)EL - No Observed (Adverse) Ef- fect Level  
 NOELR - No Observable Effect Loading Rate  
 NOM - Official MexicanNorm  
 NTP - National Toxicology Program  
 NZIoC - New Zealand Inventory of Chem- icals  
 OECD - Organisation for Economic Co-operation and Development  
 OPPTS - Of- fice of Chemical Safety and Pollution Prevention  
 PBT - Persistent, Bioaccumulative and Toxic substance  
 PICCS - Philippines Inventory of Chemicals and Chemical Sub- stances  
 (Q)SAR - (Quantitative) Structure Activity Relationship  
 REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning theRegistration, Evaluation, Authorisation and Restriction of Chemicals  
 SADT - Self-Accelerating Decomposition Temperature  
 SDS - Safety Data Sheet

TCSI - TaiwanChemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI -Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (UnitedStates)

UN - United Nations

UNRTDG - United Nations Recommendations on theTransport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.