

## Safety Data Sheet

### 1. Identification of the substance

*Product Name:* **4,4-Difluoro-1-cyclohexene-1-boronic acid pinacol ester**  
*Synonyms:*  
*Catalog number:* FM-3106  
*Supplier:* Combi-Blocks, Inc., 7949 Silverton Ave # 915, San Diego, CA 92126, USA. Tel: 858-635-8950

### 2. Hazards identification

*Pictograms*



*Single word* Warning  
*H302* Harmful if swallowed  
*H315* Causes skin irritation  
*H319* Causes serious eye irritation  
*H335* May cause respiratory irritation  
*P261* Avoid breathing dust/fume/gas/mist/vapours/spray  
*P301+P312* If swallowed Call a POISON CENTER or doctor/physician if you feel unwell  
*P302+P352* If on skin Wash with soap and water  
*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 – continue rinsing

### 3. Composition/information on ingredients.

*Ingredient name:* 4,4-Difluoro-1-cyclohexene-1-boronic acid pinacol ester  
*CAS number:* 1227068-84-9

### 4. First aid measures

*Skin contact:* Immediately wash skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. If irritation persists, seek medical attention.  
*Eye contact:* Immediately wash skin with copious amounts of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. If irritation persists, seek medical attention.  
*Inhalation:* Remove to fresh air. In severe cases or if symptoms persist, seek medical attention.  
*Ingestion:* Wash out mouth with copious amounts of water for at least 15 minutes. Seek medical attention.

### 5. Fire fighting measures

In the event of a fire involving this material, alone or in combination with other materials, use dry powder or carbon dioxide extinguishers. Protective clothing and self-contained breathing apparatus should be worn.

### 6. Accidental release measures

*Personal precautions:* Wear suitable personal protective equipment which performs satisfactorily and meets local/state/national standards.

Respiratory precaution: Wear approved mask/respirator  
Hand precaution: Wear suitable gloves/gauntlets  
Skin protection: Wear suitable protective clothing  
Eye protection: Wear suitable eye protection

*Methods for cleaning up:* Mix with sand or similar inert absorbent material, sweep up and keep in a tightly closed container for disposal. See section 12.

*Environmental precautions:* Do not allow material to enter drains or water courses.

## 7. Handling and storage

*Handling:* This product should be handled only by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals, who should take into account the fire, health and chemical hazard data given on this sheet.

*Storage:* Store in closed vessels, under  $-20^{\circ}\text{C}$ .

## 8. Exposure Controls / Personal protection

*Engineering Controls:* Use only in a chemical fume hood.

*Personal protective equipment:* Wear laboratory clothing, chemical-resistant gloves and safety goggles.

*General hygiene measures:* Wash thoroughly after handling. Wash contaminated clothing before reuse.

## 9. Physical and chemical properties

*Appearance:* Not specified

*Boiling point:* No data

*Melting point:* No data

*Flash point:* No data

*Density:* No data

*Molecular formula:*  $\text{C}_{12}\text{H}_{19}\text{BF}_2\text{O}_2$

*Molecular weight:* 244.1

## 10. Stability and reactivity

*Conditions to avoid:* Heat, flames and sparks.

*Materials to avoid:* Oxidizing agents.

*Possible hazardous combustion products:* Carbon monoxide, hydrogen fluoride.

## 11. Toxicological information

*Acute toxicity:* Harmful if swallowed.

*Skin irritation/corrosion:* Causes skin irritation.

*Eye damage/irritation:* Causes serious eye irritation.

*Respiratory or skin sensitization:* May cause respiratory irritation.

*Germ cell mutagenicity:* No data available.

*Carcinogenicity:* No classification data on carcinogenic properties of this material is available from 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 data available.

*Aspiration hazard:* No data available.

*Additional information:* To the best of our knowledge, the chemical, physical and toxicological properties of this substance have not been thoroughly investigated.

## 12. Ecological information

*Toxicity:* No data available.

*Persistence and degradability:* No data available.

*Bioaccumulative potential:* No data available.

*Mobility in soil:* No data available.

*Result of PBT and vPvB assessment:* PBT: Not applicable. vPvB: Not applicable.

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

### **13. Disposal consideration**

Arrange disposal as special waste, by licensed disposal company, in consultation with local waste disposal authority, in accordance with national and regional regulations.

### **14. Transportation information**

No known hazard for air and ground transportation.

### **15. Regulatory information**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, or have known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

### **16. Other information**

This MSDS is correct to the best of our knowledge at the date of publication but does not purport to be all inclusive and shall be used only as a guide. Combi-Blocks shall not be held liable for any injury or damage resulting from handling or from contact with the above product.