According to OHSA 29 CFR 1910.1200



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

1.1 Product identifier

CAS number: 139219-68-4

Product name: 4-Difluoromethyl-1,1'-biphenyl

Catalog number: HFC5331

Brand: Hoffman Fine Chemicals

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

Identified uses: For laboratory research purposes. Not for drug, household

nor animal use.

1.3 Details of the supplier of the safety data sheet

Company: Hoffman Fine Chemicals Pty Ltd

Address: 4 46-50 Buchanan Road, Brooklyn, Victoria, 3012, Australia

Telephone: 61 3 7003 5401

Fax:

1.4 Emergency telephone number

Emergency 800-424-9300 CHEMTREC USA 1-703-527-3887 CHEMTREC

telephone number: International 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910(OSHA HCS)







According to OHSA 29 CFR 1910.1200





According to OHSA 29 CFR 1910.1200



Supplemental Hazard information

None.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Product name: 4-Difluoromethyl-1,1'-biphenyl

CAS number: 139219-68-4
Formula: C13H10F2
Molecular weight: 204.22

Concentration: <=100 Percent

3.2 Mixtures

No data available.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Consult a physician. Show this material safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

According to OHSA 29 CFR 1910.1200



In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Provided the patient is conscious, wash out mouth with water. Vomiting should only be induced under the direction of a physician or a poison control centre.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

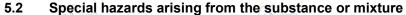
5.1 Extinguishing media

Suitable extinguishing media

No data available.









According to OHSA 29 CFR 1910.1200



5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary. No data available.

5.4 Further information

No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No data available.

6.2 Environmental protections

Prevent further leakage or spillage if safe to do so. Do not let product enter drains or river. Alert the neighbourhood to the presence of fumes or gas.

6.3 Methods and material for containment and cleaning up

No data available.

6.4 Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- a) Handle in accordance with good industrial hygiene and safety practice
- b) Take measures to prevent the build-up of electrostatic charge.

According to OHSA 29 CFR 1910.1200



- c) Provide appropriate exhaust ventilation at places where dust is formed.
- d) Avoid inhalation of vapor or mist.
- e) Not to eat, drink, smoke in work areas.
- f) To wash hands after use.
- g) To remove contaminated clothing and protective equipment before entering eating areas.

For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated area Containers which are opened must be carefully resealed and kept upright to prevent leakage.

No data available.

7.3 Specific end use(s)

Apart from the uses mentioned in Section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

No data available.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

- a) Handle in accordance with good industrial hygiene and safety practice.
- b) Wash hands before breaks and at the end of workday.
- c) Suitable eye/body wash equipment should be available in the vicinity of any potential exposure.
- d) Ensure adequate ventilation, especially in confined areas.

According to OHSA 29 CFR 1910.1200



- e) Use explosion-proof electrical appliances, ventilation, lighting and other equipment.
- f) Set up emergency evacuation routes and necessary evacuation zones.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:
Odor:
Odor threshold:
PH:
Melting point/freezing point:
No data available.

According to OHSA 29 CFR 1910.1200



Flash point:
Evaporation rate:
Flammability (solid, gas):
Upper explosive limits:
Lower explosive limits:
Vapor pressure:
Vapor density:
Relative density:
Water solubility:
Partition coefficient: n-octanol/water

Auto-ignition temperature:
Decomposition temperature:
Viscosity:
Explosive properties:
Oxidizing properties:

No data available.

No data available.
No data available.
No data available.
No data available.
No data available.
No data available.

No data available.

No data available.

No data available.



No data available.



SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.



No data available.

10.3 Possibility of hazardous reactions

No data available.



10.4 Conditions to avoid





According to OHSA 29 CFR 1910.1200



10.5 Incompatible materials

No data available.



No data available.



11.1 Information on toxicological effects

No data available. Acute toxicity: No data available. Skin corrosion/irritation: No data available. Serious eye damage/eye irritation: No data available. Respiratory or skin sensitization: No data available. Germ cell mutagenicity:

Carcinogenicity:

Reproductive toxicity: No data available. Specific Target Organ Toxicity

(Single Exposure):

Specific Target Organ Toxicity (Repeated Exposure):

Aspiration hazard: **Chronic Symptoms:** No data available.

No data available.

No data available. No data available.

No data available.

11.2 **Additional information**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Toxicity 12.1

No data available.

12.2 Persistence and degradability



According to OHSA 29 CFR 1910.1200



12.3 Bioaccumulative potential

No data available.



No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- a) Dispose of contents/container in accordance with local, regional, national, and international regulations.
- b) Avoid release to the environment.
- c) Contaminated packaging dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number:

Class:

No data availa

Packing group:

Proper shipping name:

Reportable quantity (RQ): Poison inhalation hazard:

IMDG

UN number:

Class:

EMS-No:

F C Fine Chemicals



According to OHSA 29 CFR 1910.1200



Proper shipping name:

IATA

UN number:

Class:

No data available.

Proper shipping name:

SECTION 15: Regulatory information

15.1 U.S. Federal regulations

OSHA 29 CFR 1910.1200: No data available.

Toxic Substances Control

Act (TSCA):

No data available.

No data available.

Comprehensive Response Compensation and Liability Act (CERCLA):

Superfund Amendments and Reauthorization Act (SARA Title III):

SARA 313 Reportable

Ingredients:

No data available.

No data available.

California Proposition 65:

No data available.

Safety Assessment:

No data available.



SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 16.1



According to OHSA 29 CFR 1910.1200









16.2 Further information

The reference company name of written contents:

Company: Hoffman Fine Chemicals Pty Ltd

Address: 4 46-50 Buchanan Road, Brookyn, Victoria, 3012, Australia

Email: infoathoffmanchemicals.com

Telephone: 61 3 7003 5401

Fax:

The above information is provided without any warranty, express or implied, regarding its correctness and does not purport to be all inclusive and shall be used only as a guide. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. This Safety Data Sheet ('SDS') was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable

The conditions or methods of handling, storage, contact, use or disposal of the product are beyond our control and may be beyond our knowledge. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of having unknown hazards and toxicity, which differ greatly depending on the conditions and/or duration of handling, storage, contact, use and/or disposal. The products must be handled only by those who are familiar with specialized knowledge and have experience and/or under the guidance of those specialists throughout handling, storage, contact, use and disposal. Safe usage conditions shall be set up on each user's own responsibility. New information or amendments may be made to this SDS.

For the abovementioned reasons and others, the Company listed in Section 16.2 of this SDS and its affiliates do not assume responsibility and expressly disclaim any liability for loss, damage and/or expense arising out of or in any way connected with the handling, storage, contact, use and/or disposal of this product.

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