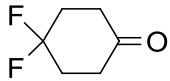



# MATERIAL SAFETY DATA SHEET

07/09/2010

## 1- PRODUCT & COMPANY INFORMATION

Product Name	4,4-Difluorocyclohexanone	
Catalog Number	OC-0010	
Company	OmegaChem inc. 480 rue Perreault Saint-Romuald (Quebec) Canada G6W 7V6 Tel. (418) 837-4444 Fax (418) 837-5196 <a href="mailto:info@omegachem.com">info@omegachem.com</a> <a href="http://www.omegachem.com">www.omegachem.com</a>	 <b>OmegaChem</b>

## 2 – COMPOSITION / INGREDIENTS

Substance Name	4,4-Difluorocyclohexanone		
CAS Number	SARA 313	Formula	
22515-18-0	N/A	C6H8F2O	

## 3 – HAZARDS IDENTIFICATION

For information on toxicity, please refer to section 11.

## 4 – FIRST AID

Oral exposure	If swallowed, wash out with water, provided the person is conscious and call a physician.
Inhalation exposure	Remove the person to fresh air. Give artificial respiration if not breathing. Give oxygen if breathing is difficult. Call a physician.
Dermal exposure	Immediately wash skin with soap and large amounts of water. Call a physician.
Eye exposure	Flush eyes with large amounts of water for at least 15 minutes. Call a physician.

## 5 – FIRE FIGHTING MEASURES

Flash point	Autoignition temperature	Flammability
N/A	N/A	N/A
Extinguishing media	Water spray; carbon dioxide; dry chemical powder or appropriate foam.	
Firefighting	<b>Protective equipment:</b> Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. <b>Specific hazard(s):</b> Emits toxic fumes under fire conditions.	

## 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.
Method for cleaning up	Sweep up and place in closed containers for disposal.
	Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.
Procedure in case of leak or spill	N/A

**7 – HANDLING AND STORAGE**

<b>Handling</b>	Avoid inhalation, contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.
<b>Storage</b>	Keep tightly closed. Store in a cool dry place.

**8 – EXPOSURE CONTROLS / PPE**

<b>Engineering controls</b>	Safety shower and eye bath. Mechanical exhaust required.
<b>Personal protective equipment</b>	<b>Respiratory:</b> government approved respirator. <b>Hand:</b> compatible chemical-resistant gloves. <b>Eye:</b> chemical safety goggles.
<b>General hygiene measures</b>	Wash thoroughly after handling. Wash contaminated clothing before reuse.

**9 – PHYSICAL / CHEMICAL PROPERTIES**

<b>Appearance</b>	White solid		
<b>Molecular Weight</b>	134.12 AMU	<b>Evaporation rate</b>	N/A
<b>pH</b>	N/A	<b>Viscosity</b>	N/A
<b>Boiling point</b>	N/A	<b>Surface tension</b>	N/A
<b>Melting point</b>	35.9°C	<b>Partition coefficient</b>	N/A
<b>Freezing point</b>	N/A	<b>Decomposition temp.</b>	N/A
<b>Vapor pressure</b>	N/A	<b>Flash point</b>	N/A
<b>Vapor density</b>	N/A	<b>Explosion limits</b>	N/A
<b>Saturated Vapor Conc.</b>	N/A	<b>Flammability</b>	N/A
<b>SG / Density</b>	N/A	<b>Autoignition temp.</b>	N/A
<b>Odor threshold</b>	N/A	<b>Refractive index</b>	N/A
<b>Volatile</b>	N/A	<b>Optical rotation</b>	N/A
<b>VOC content</b>	N/A	<b>Solubility</b>	N/A
<b>Water content</b>	N/A	<b>Miscellaneous</b>	N/A
<b>Solvent content</b>	N/A	N/A = not available	

**10 – STABILITY AND REACTIVITY**

<b>Stability</b>	Stable <b>Materials to avoid:</b> strong oxidizing agents
<b>Hazardous decomposition products</b>	Carbon monoxide Carbon dioxide Hydrogen fluoride

**11-TOXICOLOGICAL INFORMATION**

Route of exposure	
Skin contact	May cause skin irritation.
Skin absorption	May be harmful if absorbed through the skin
Eye	May cause eye irritation.
Inhalation	May be harmful if inhaled. May be irritating to mucous membranes and upper respiratory tract.
Ingestion	May be harmful if swallowed.
Signs and symptoms of exposure	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**12 – ECOLOGICAL INFORMATION**

	N/A
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**13 – DISPOSAL CONSIDERATIONS**

Appropriate method of disposal of substance or preparation	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.
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**14 – TRANSPORT INFORMATION**

DOT	Proper shipping name: none Non-hazardous for transport: this substance is considered to be non-hazardous for transport.
IATA	Non-hazardous for air transport: Non-hazardous for air transport.

**15 – REGULATORY INFORMATION**

EU	N/A
USA	SARA listed: N/A
Canada	WHMIS : This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by CPR. DSL : N/A NDSL : N/A

**16 – OTHER INFORMATION**

The product is to be used for R&D only. Not for drug, household or other uses.  
 The above information is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety measures. It is believed to be correct but does not purport to be inclusive and shall be used only as a guide.  
 OmegaChem Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.