

Revision Date 23-Mar-2012

Revision Number 2

## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Identifier**

**Product Description:** Cyclobutanecarboxylic acid chloride  
**Cat No.** 110910000; 110910010; 110910100; 110910500  
**Synonyms** None Known.

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

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**

Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

**E-mail address** [begeel.sdsdesk@thermofisher.com](mailto:begeel.sdsdesk@thermofisher.com)

**Emergency Telephone Number**

For information in the US, call: 001-800-ACROS-01  
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99  
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300  
 CHEMTREC Phone Number, Europe: 001-703-527-3887

## SECTION 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Flammable liquids.	Category 3

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

*For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16*

**Symbol(s)** C - Corrosive  
**R-phrases(s)** R10 - Flammable  
 R34 - Causes burns

Cyclobutanecarboxylic acid chloride

Revision Date 23-Mar-2012

**SECTION 2. HAZARDS IDENTIFICATION**

**Label Elements**



**Signal Word**

**Danger**

**Hazard Statements**

H314 - Causes severe skin burns and eye damage  
 H226 - Flammable liquid and vapor

**Precautionary Statements - EU (§28, 1272/2008)**

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
 P280 - Wear eye protection/ face protection  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P310 - Immediately call a POISON CENTER or doctor/ physician  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

**Other Hazards**

Lachrymator (substance which increases the flow of tears).

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Cyclobutanecarbonyl chloride 5006-22-4	EEC No. 225-680-8	99	5006-22-4	R10 C; R34;	Skin Corr. 1B (H314)	-

**For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16**

Cyclobutanecarboxylic acid chloride

Revision Date 23-Mar-2012

**SECTION 4. FIRST AID MEASURES****Description of first aid measures****Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Ingestion**

Do not induce vomiting. Call a physician immediately.

**Inhalation**

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

**Notes to Physician**

Treat symptomatically

**SECTION 5. FIRE-FIGHTING MEASURES****Extinguishing media****Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. chemical foam.

**Extinguishing media which must not be used for safety reasons**

Water.

**Special hazards arising from the substance or mixture**

Flammable.

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

**Environmental precautions**

Prevent further leakage or spillage if safe to do so

**Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Sweep up or vacuum up spillage and collect in suitable container for disposal.



Cyclobutanecarboxylic acid chloride

Revision Date 23-Mar-2012

**SECTION 7. HANDLING AND STORAGE**

**Precautions for Safe Handling**

Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation. Use explosion-proof equipment. Use only non-sparking tools.

**Conditions for safe storage, including any incompatibilities**

Keep in a dry place. Keep container tightly closed. Keep away from heat and sources of ignition. Refrigerator/flammables.

**Specific End Uses**

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological limit values** This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL)** No information available.  
**Predicted No Effect Concentration (PNEC)** No information available.

**Exposure controls**

**Engineering Measures** Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

**Personal protective equipment**

**Eye Protection** Goggles  
**Hand Protection** Protective gloves  
**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure  
**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice  
**Environmental exposure controls** No information available.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State** Liquid  
**Appearance** Colorless  
**odor** pungent  
**pH** No information available.  
**Vapor Density** 4.1  
**Boiling Point/Range** 145°C / 293°F @ 760 mmHg

Cyclobutanecarboxylic acid chloride

Revision Date 23-Mar-2012

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Melting Point/Range	No information available.
Flash Point	37°C / 98.6°F
Autoignition Temperature	No information available.
Molecular Formula	C <sub>5</sub> H <sub>7</sub> Cl O
Molecular Weight	118.56

**SECTION 10. STABILITY AND REACTIVITY****Reactivity****Chemical Stability**

Moisture sensitive.

**Possibility of Hazardous Reactions**

Hazardous Polymerization	No information available.
Hazardous Reactions .	No information available.

**Conditions to Avoid**

Keep away from open flames, hot surfaces and sources of ignition, Incompatible products, Exposure to moist air or water.

**Incompatible Materials**

Strong oxidizing agents.

**Hazardous Decomposition Products**Hydrogen chloride gas. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).**SECTION 11. TOXICOLOGICAL INFORMATION****Information on Toxicological Effects****Acute Toxicity**

Product Information	No acute toxicity information is available for this product
---------------------	---

**Component Information****Chronic Toxicity**

Carcinogenicity	There are no known carcinogenic chemicals in this product
-----------------	---

Sensitization	No information available.
Mutagenic Effects	No information available



**Cyclobutanecarboxylic acid chloride**

**Revision Date 23-Mar-2012**

**SECTION 11. TOXICOLOGICAL INFORMATION**

<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Target Organs</b>	No information available.
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Endocrine Disruptor Information</b>	None known

**SECTION 12. ECOLOGICAL INFORMATION**

**Toxicity**

**Ecotoxicity effects** Do not empty into drains

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**

**Other adverse effects**

No information available

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from Residues / Unused Products** Dispose of in accordance with local regulations

**Contaminated Packaging** Empty containers should be taken to local recyclers for disposal

**SECTION 14. TRANSPORT INFORMATION**

**IMDG/IMO**

<b>UN-No</b>	2920
<b>Hazard Class</b>	8
<b>Subsidiary Hazard Class</b>	3
<b>Packing Group</b>	II

Cyclobutanecarboxylic acid chloride

Revision Date 23-Mar-2012

**SECTION 14. TRANSPORT INFORMATION**

Proper Shipping Name CORROSIVE LIQUID, FLAMMABLE, N.O.S.

**ADR**

UN-No 2920  
 Hazard Class 8  
 Subsidiary Hazard Class 3  
 Packing Group II  
 Proper Shipping Name CORROSIVE LIQUID, FLAMMABLE, N.O.S.

**IATA**

UN-No 2920  
 Hazard Class 8  
 Subsidiary Hazard Class 3  
 Packing Group II  
 Proper Shipping Name CORROSIVE LIQUID, FLAMMABLE, N.O.S.\*

**SECTION 15. REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**International Inventories**

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Cyclobutanecarbonyl chloride	225-680-8	-		-	-	-	-	-	-	X	-

**Legend**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- CHINA** - China Inventory of Existing Chemical Substances
- AICS** - Inventory of Chemical Substances
- KECL** - Existing and Evaluated Chemical Substances

**Chemical Safety Assessment**

Cyclobutanecarboxylic acid chloride

Revision Date 23-Mar-2012

**SECTION 16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R10 - Flammable

R34 - Causes burns

Revision Date 23-Mar-2012

**Revision Summary**

Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet