

Revision Date 09-Nov-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**

**Product Description:** trans-3,6-endo-Methylene-1,2,3,6-tetrahydrophthaloyl chloride  
**Cat No.** 151240000; 151240250; 151241000  
**Synonyms** trans-5-Norbornene-2,3-dicarbonyl chloride

**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** begel.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

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

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

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Skin Corrosion / irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1

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

*For the full text of the R phrases mentioned in this Section, see Section 16*

**Symbol(s)** C - Corrosive  
**R -phrase(s)** R34 - Causes burns

**Label Elements**

trans-3,6-endo-Methylene-1,2,3,6-tetrahydrophthaloyl chloride

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**2. HAZARDS IDENTIFICATION**



**Signal Word**

**Danger**

**Hazard Statements**

H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H312 - Harmful in contact with skin

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

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
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  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

**Other Hazards**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
(2-Endo,3-exo)-bicyclo[2.2.1]hept-5-ene-2,3-dicarbonyl dichloride 4582-21-2	EEC No. 224-967-5	97	4582-21-2	C; R34	Skin Corr. 1B (H314)	-

**For the full text of the R phrases mentioned in this Section, see Section 16**

**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 removing all contaminated clothes and shoes Obtain medical attention Take off contaminated clothing and shoes immediately

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Ingestion	Do not induce vomiting
Inhalation	Move to fresh air
Notes to Physician	Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

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

No information available.

### Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

### Advice for fire-fighters

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

## 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. Keep in suitable and closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Ensure adequate ventilation

### Conditions for safe storage, including any incompatibilities

Corrosives area

### Specific End Uses

## 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.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Derived No Effect Level (DNEL)</b>	No information available.
<b>Predicted No Effect Concentration (PNEC)</b>	No information available.
<b>Exposure controls</b>	
<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas
<b>Personal protective equipment</b>	
<b>Eye Protection</b>	Safety glasses with side-shields
<b>Hand Protection</b>	Protective gloves
<b>Skin and body protection</b>	Long sleeved clothing
<b>Respiratory Protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Light yellow
<b>odor</b>	odorless
<b>pH</b>	No information available.
<b>Boiling Point/Range</b>	114 - 118°C / 237.2 - 244.4°F@ 11 mmHg
<b>Melting Point/Range</b>	No information available.
<b>Flash Point</b>	110°C / 230°F
<b>Autoignition Temperature</b>	No information available.
<b>Specific Gravity</b>	1.340
<b>Molecular Formula</b>	C9 H8 Cl2 O2
<b>Molecular Weight</b>	219.07

## 10. STABILITY AND REACTIVITY

**Reactivity**
**Chemical Stability**

Stable under normal conditions

**Possibility of Hazardous Reactions**
**Hazardous Polymerization**

No information available

**Hazardous Reactions .**

No information available.

**Conditions to Avoid**

Heat, flames and sparks

**Incompatible Materials**
**Hazardous Decomposition Products**

None under normal use

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**11. TOXICOLOGICAL INFORMATION**Information on Toxicological EffectsAcute Toxicity**Component Information****Component**(2-Endo,3-exo)-  
bicyclo[2.2.1]hept-5-ene-2,3-  
dicarbonyl dichloride

LD50 Oral	LD50 Dermal	LC50 Inhalation
1830 µL/kg ( Rat )	1 mL/kg ( Rabbit )	

Chronic Toxicity**Carcinogenicity**

There are no known carcinogenic chemicals in this product

**Sensitization****Mutagenic Effects****Reproductive Effects****Developmental Effects****Target Organs****Endocrine Disruptor Information**

No information available.

No information available

No information available.

No information available.

No information available.

None known

**12. ECOLOGICAL INFORMATION**Toxicity**Ecotoxicity effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessmentOther adverse effects

No information available

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**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 for local recycling, recovery or waste disposal

**14. TRANSPORT INFORMATION**

**IMDG/IMO**

**UN-No** UN1760  
**Hazard Class** 8  
**Packing Group** II  
**Proper Shipping Name** CORROSIVE LIQUID, N.O.S.

**ADR**

**UN-No** UN1760  
**Hazard Class** 8  
**Packing Group** II  
**Proper Shipping Name** CORROSIVE LIQUID, N.O.S.

**IATA**

**UN-No** UN1760  
**Hazard Class** 8  
**Packing Group** II  
**Proper Shipping Name** CORROSIVE LIQUID, N.O.S.

**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
(2-Endo,3-exo)-bicyclo[2.2.1]hept-5-ene-2,3-dicarbonyl dichloride	224-967-5	-		-	-	-	-	-	-	-	-

**Legend**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- EINECS/ELINCS** - European Inventory Lists
- 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

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**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

### **Chemical Safety Assessment**

## **16. OTHER INFORMATION**

### **Text of R phrases mentioned in Section 2-3**

R34 - Causes burns

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Revision Summary Not applicable

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

### **Disclaimer**

The information provided on this SDS 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