

Revision Date 24-Nov-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

**Product Description:** cis-(1S,2S)-1,2-Dihydro-3-fluorocatechol, 20 w/v% in ethylacetate  
**Cat No.** 298010000; 298010050  
**Synonyms** (1S-cis)-3-Fluoro-3,5-cyclohexadiene-1,2-diol

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

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

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

Skin Corrosion / irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ systemic toxicity (single exposure)	Category 3
Flammable liquids.	Category 2

### 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)** F - Highly flammable

Xi - Irritant

**R -phrase(s)** R11 - Highly flammable

R66 - Repeated exposure may cause skin dryness or cracking

R67 - Vapors may cause drowsiness and dizziness

**Risk Combination Phrases** R36/37/38 - Irritating to eyes, respiratory system and skin

## 2. HAZARDS IDENTIFICATION

### Label Elements



### Signal Word

**Danger**

### Hazard Statements

H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H315 - Causes skin irritation  
H335 - May cause respiratory irritation  
H225 - Highly flammable liquid and vapor  
EUH066 - Repeated exposure may cause skin dryness or cracking

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water  
P280 - Wear protective gloves/protective clothing/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  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P240 - Ground/Bond container and receiving equipment

### Other Hazards

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
cis-(1S,2S)-1,2-Dihydro-3-fluorocatechol 131101-27-4		20	131101-27-4	F; R11 Xi; R36/37/38 R66-67	STOT SE 3 (H335) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) (EUH066)	-

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ethylacetate 141-78-6	EEC No. 205- 500-4	80	141-78-6	F;R11 Xi;R36 R66 R67	STOT SE 3 (H336) Eye Irrit. 2 (H319) Flam Liq. 2 (H225) (EUH066)	01-2119475103-46
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For the full text of the R phrases mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

#### Description of first aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Obtain medical attention
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes Obtain medical attention
<b>Ingestion</b>	Clean mouth with water Get medical attention
<b>Inhalation</b>	Remove from exposure, lie down Move to fresh air Obtain medical attention
<b>Notes to Physician</b>	Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing media

##### **Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>) Dry chemical Use water spray to cool unopened containers chemical foam

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

Water may be ineffective

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

Flammable Vapors may form explosive mixtures with air

#### 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 (e.g. sand, silica gel, acid binder, universal binder, sawdust) Keep in suitable and closed containers for disposal Remove all sources of ignition Use spark-proof tools and explosion-proof equipment

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid contact with skin and eyes Do not breathe dust Do not breathe vapors or spray mist Take precautionary measures against static discharges Use explosion-proof equipment Use only non-sparking tools

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place Keep container tightly closed Keep away from heat and sources of ignition Flammables area Refrigerator/flammables

### Specific End Uses

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure limits

#### Component

Ethylacetate

European Union	The United Kingdom	France	Belgium	Spain
		VME: 1400 mg/m <sup>3</sup> VME: 400 ppm	TWA: 1461 mg/m <sup>3</sup> TWA: 400 ppm	VLA-ED: 400 ppm VLA-ED: 1460 mg/m <sup>3</sup>

#### Component

Ethylacetate

Italy	Portugal	The Netherlands	Finland	Denmark
	TWA: 400 ppm		TWA: 300 ppm TWA: 1100 mg/m <sup>3</sup> STEL: 1800 mg/m <sup>3</sup> STEL: 500 ppm	TWA: 150 ppm TWA: 540 mg/m <sup>3</sup>

#### Component

Ethylacetate

Austria	Switzerland	Poland	Norway	Ireland
STEL: 2100 mg/m <sup>3</sup> STEL: 600 ppm MAK: 300 ppm MAK: 1050 mg/m <sup>3</sup>	STEL: 800 ppm STEL: 2800 mg/m <sup>3</sup> MAK: 400 ppm MAK: 1400 mg/m <sup>3</sup>	NDSch: 600 mg/m <sup>3</sup> NDS: 200 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 550 mg/m <sup>3</sup>	TWA: 200 ppm STEL: 400 ppm

### 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

#### 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Brown
Boiling Point/Range	77°C / 170.6°F
Melting Point/Range	No information available.
Flash Point	-4°C / 24.8°F
Water Solubility	Insoluble
Specific Gravity	0.960
Molecular Weight	130.12

## 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

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

#### Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases.

#### Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Gaseous hydrogen fluoride (HF).

## 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Acute Toxicity

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

#### Component Information

##### **Component**

Ethylacetate

LD50 Oral	LD50 Dermal	LC50 Inhalation
5620 mg/kg ( Rat )	18000 mg/kg ( Rabbit ) 20 mL/kg ( Rabbit )	

#### Chronic Toxicity

##### **Carcinogenicity**

There are no known carcinogenic chemicals in this product

##### **Sensitization**

No information available.

##### **Mutagenic Effects**

No information available

##### **Reproductive Effects**

No information available.

##### **Developmental Effects**

No information available.

##### **Target Organs**

No information available.

Endocrine Disruptor Information      None known

## 12. ECOLOGICAL INFORMATION

### Toxicity

#### Ecotoxicity effects

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethylacetate	EC50 = 3300 mg/L/48h	Gold orfe: LC50: 270 mg/L/48h	EC50 = 1180 mg/L 5 min EC50 = 1500 mg/L 15 min EC50 = 5870 mg/L 15 min EC50 = 7400 mg/L 2 h	EC50 = 717 mg/L/48h

### Persistence and degradability

No information available

### Bioaccumulative potential

No information available.

Component	log Pow
Ethylacetate	0.6

### Mobility in soil

### Results of PBT and vPvB assessment

#### Other adverse effects

No information available

## 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	1173
Hazard Class	3
Packing Group	II
Proper Shipping Name	ETHYL ACETATE SOLUTION

### ADR

UN-No	1173
Hazard Class	3
Packing Group	II

## 14. TRANSPORT INFORMATION

Proper Shipping Name ETHYL ACETATE SOLUTION

### IATA

UN-No 1173  
Hazard Class 3  
Packing Group II  
Proper Shipping Name ETHYL ACETATE SOLUTION

## 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
Ethylacetate	205-500-4	-		T	X	-	X	X	X	X	KE-00047 X

### 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

**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

R11 - Highly flammable

R66 - Repeated exposure may cause skin dryness or cracking

R67 - Vapors may cause drowsiness and dizziness

R36/37/38 - Irritating to eyes, respiratory system and skin

Revision Date 24-Nov-2010

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