

Revision Date 16-Nov-2010

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Description: Crotyl chloride
Cat No. 154800000; 154801000; 154805000
Synonyms 1-Chloro-2-butene

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

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

C - Corrosive

R -phrase(s)

R11 - Highly flammable

R22 - Harmful if swallowed

R34 - Causes burns

2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

H335 - May cause respiratory irritation
 H302 - Harmful if swallowed
 H318 - Causes serious eye damage
 H314 - Causes severe skin burns and eye damage
 H225 - Highly 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
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 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.
1-Butene, 3-chloro-	EEC No. 209-252-8	23-38	563-52-0	F; R11 Xn; R22 Xi; R36/37/38;	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	
1-Crotyl chloride	EEC No. 209-739-5	65	591-97-9	F; R11 Xn; R22 C; R34	Skin Corr. 1B (H314) Acute Tox. 4 (H302)	

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 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

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Carbon dioxide (CO₂) Dry chemical chemical foam

Extinguishing media which must not be used for safety reasons

No information available.

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

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 Do not let this chemical enter the environment

7. HANDLING AND STORAGE

Precautions for Safe Handling

7. HANDLING AND STORAGE

Do not breathe dust Do not breathe vapors or spray mist Do not get in eyes, on skin, or on clothing Do not ingest 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 Corrosives area Flammables area Keep refrigerated

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.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Colorless

odor

irritating

pH

3

Boiling Point/Range

80 - 85°C / 176 - 185°F @ 760 mmHg

Melting Point/Range

-65°C / -85°F

Flash Point

-15°C / 5°F

Water Solubility

+/- 14 g/L (20°C)

Specific Gravity

0.920

Molecular Formula

C4 H7 Cl

Molecular Weight

90.55

10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

Hazardous Polymerization
Hazardous Reactions .

Hazardous polymerization does not occur.
No information available.

Conditions to Avoid

Keep away from open flames, hot surfaces and sources of ignition, Incompatible products.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Hydrogen chloride gas. Carbon monoxide (CO). Carbon dioxide (CO₂).

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

Reproductive Effects

No information available.

Developmental Effects

No information available.

Target Organs

No information available.

Other Adverse Effects

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

Endocrine Disruptor Information

None known

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

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	2924
Hazard Class	3
Subsidiary Hazard Class	8
Packing Group	II

ADR

UN-No	2924
Hazard Class	3
Subsidiary Class	8
Packing Group	II

IATA

UN-No	2924
Hazard Class	3
Subsidiary Hazard Class	8
Packing Group	II

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
1-Butene, 3-chloro-	209-252-8	-		X	-	X	X	X	-	-	-
1-Crotyl chloride	209-739-5	-		X	-	X	X	X	X	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

R22 - Harmful if swallowed

R34 - Causes burns

Revision Date 16-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