

Creation Date 23-Mar-2012

Revision Date 12-Jun-2012

Revision Number 4

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

Product Identifier

Product Description: 1,3-Dichloro-2-butene, mixture of cis and trans isomers
Cat No. 406780000; 406780050

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

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 3
Acute Inhalation Toxicity - Vapors	Category 3
Skin Corrosion/Irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity - (single exposure)	Category 3
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 R10 - Flammable
 R34 - Causes burns
Risk Combination Phrases R20/22 - Harmful by inhalation and if swallowed

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SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage
H301 - Toxic if swallowed
H331 - Toxic if inhaled
H226 - Flammable liquid and vapor

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

P310 - Immediately call a POISON CENTER or doctor/ physician
P260 - Do not breathe 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

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.

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1,3-Dichlorobutene-2 926-57-8	EEC No. 213-138-3	>95	926-57-8	R10 Xn; R20/22 C; R34	Flam. Liq. 3 (H226) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Acute Tox. 3 (H301) Acute Tox. 3 (H331)	-
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For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

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

Skin Contact

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

Ingestion

Clean mouth with water. Get medical attention.

Inhalation

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

Notes to Physician

Treat symptomatically

SECTION 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

Water may be ineffective.

Special hazards arising from the substance or mixture

Flammable. Vapors may travel to source of ignition and flash back.

Advice for fire-fighters

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

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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.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not breathe vapors or spray mist. 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. 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.

Component

1,3-Dichlorobutene-2

Russia - TWA	Slovak Republic	Slovenia	Sweden	Turkey
Skin notation MAC: 1 mg/m ³				

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

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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	A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149

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	Dark yellow
odor	aromatic
pH	No information available.
Vapor Density	4.31
Boiling Point/Range	125 - 129°C / 257 - 264.2°F @ 760 mmHg
Melting Point/Range	No information available.
Flash Point	33°C / 91.4°F
Autoignition Temperature	No information available.
Water Solubility	Insoluble
Specific Gravity	1.160
Molecular Formula	C ₄ H ₆ Cl ₂
Molecular Weight	125

SECTION 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

Incompatible products.

Incompatible Materials

Strong oxidizing agents, Strong bases.

Hazardous Decomposition Products

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

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation (Dust)
1,3-Dichlorobutene-2	300 mg/kg (Rat)		3650 mg/m ³ (Rat) 4 h 546 ppm (Rat) 4 h

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

SECTION 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

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,3-Dichlorobutene-2		6.4 mg/L LC50 96 h		

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

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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

UN-No UN2920
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group II
Proper Shipping Name Corrosive liquid, flammable, n.o.s

ADR

UN-No UN2920
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group II
Proper Shipping Name Corrosive liquid, flammable, n.o.s

IATA

UN-No UN2920
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
1,3-Dichlorobutene-2	213-138-3	-		X	-	X	-	X	-	-	-

1,3-Dichloro-2-butene, mixture of cis and trans isomers**Revision Date 12-Jun-2012****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****SECTION 16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R10 - Flammable

R34 - Causes burns

R20/22 - Harmful by inhalation and if swallowed

Revision Date 12-Jun-2012**Revision Summary****Reason for revision** (M)SDS sections updated, 2, 3, 14.**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