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

Product Identifier
Product Description: 2-Butyne
Cat No. 135140000; 135140010; 135140050
Synonyms Dimethylacetylene; Crotonylene

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 Pharmaceuticaal 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
Skin Corrosion/irritation Category 2
Serious Eye Damage/Eye Irritation Category 2
Specific target organ systemic toxicity (single exposure) Category 3
Flammable liquids Category 1

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) F+ - Extremely flammable
Xi - Irritant
R-phrase(s) R12 - Extremely flammable
Risk Combination Phrases R36/37/38 - Irritating to eyes, respiratory system and skin
SECTION 2. HAZARDS IDENTIFICATION

Label Elements

Signal Word Danger

Hazard Statements
H335 - May cause respiratory irritation
H319 - Causes serious eye irritation
H315 - Causes skin irritation
H224 - Extremely flammable liquid and vapor

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
P243 - Take precautionary measures against static discharge
P403 + P235 - Store in a well-ventilated place. Keep cool

Other Hazards
No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

|-----------|--------|----------|--------|--------------------------|-------------------------------------------------|----------|

ACR13514
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EEC No.</th>
<th>CAS No.</th>
<th>R-phrases</th>
<th>H-statements</th>
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<tbody>
<tr>
<td>2-Butyne</td>
<td>207-962-2</td>
<td>503-17-3</td>
<td>F+; R12; Xi; R36/37/38; Flam. Liq. 1 (H224)</td>
<td>STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)</td>
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</tbody>
</table>

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. Obtain medical attention.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

**Ingestion** Do not induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth with water. Get medical attention. If possible drink milk afterwards.

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

**Notes to Physician** Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

**Suitable Extinguishing Media** Carbon dioxide (CO₂). Dry chemical. Use water spray to cool unopened containers. chemical foam.

**Extinguishing media which must not be used for safety reasons** No information available.

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

Extremely flammable. Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

**Advice for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.
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. Do not let this chemical enter the environment.

SECTION 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. Remove and wash contaminated clothing before re-use. Do not ingest. Wash thoroughly after handling. Use explosion-proof equipment. Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities


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) 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
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<tbody>
<tr>
<td>Appearance</td>
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<tr>
<td>odor</td>
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<tr>
<td>pH</td>
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<tr>
<td>Boiling Point/Range</td>
<td>24 - 27°C / 75.2 - 80.6°F</td>
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<tr>
<td>Melting Point/Range</td>
<td>-32°C / -25.6°F</td>
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<td>Flash Point</td>
<td>-25°C / -13°F</td>
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<td>Autoignition Temperature</td>
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<td>Explosion Limits</td>
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<td>Lower</td>
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SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Possibility of Hazardous Reactions

Hazardous Polymerization
No information available.

Hazardous Reactions
No information available.

Conditions to Avoid

Incompatible Materials

Hazardous Decomposition Products
Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

ACR13514
SECTION 11. TOXICOLOGICAL INFORMATION

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.
Endocrine Disruptor Information None known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Ecotoxicity effects Do not empty into drains

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
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<td>EC50 = 48.2 mg/L 30 min</td>
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<tr>
<td></td>
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<td>EC50 = 69.7 mg/L 15 min</td>
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<td></td>
<td></td>
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<td>EC50 = 81.9 mg/L 5 min</td>
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</table>

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
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

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ADR

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IATA

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<td>Packing Group</td>
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SECTION 15. REGULATORY INFORMATION

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

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
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<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
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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
R12 - Extremely flammable
R36/37/38 - Irritating to eyes, respiratory system and skin

Revision Date 14-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