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1. Identification

Product identifier used on the label

Elastocast C1006

Recommended use of the chemical and restriction on use

Recommended use*: Chemical used in synthesis and/or formulation of industrial products Recommended use*: Chemical

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Molecular formula: C(4)H(8)O(2)

Chemical family: diols

Synonyms: 1,4-Butanediol 1,4-Butylene Glycol

1,4-DIHYDROXY-2-BUTENE

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox. 4 (oral) Acute toxicity

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

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STOT SE 3 (May cause

Specific target organ toxicity — single exposure

drowsiness and dizziness.)

Label elements

Pictogram:



Signal Word: Warning

Hazard Statement:

H302 Harmful if swallowed.

H336 May cause drowsiness or dizziness.

Precautionary Statements (Prevention):

P271 Use only outdoors or in a well-ventilated area.

P260 Do not breathe mist or vapour or spray.

P270 Do not eat, drink or smoke when using this product.
P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P312 Call a POISON CENTER or physician if you feel unwell.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for

breathing.

P301 + P330 IF SWALLOWED: rinse mouth.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste

collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

1,4-Butanediol

CAS Number: 110-63-4

Content (W/W): >= 99.5 - <= 100.0%

Synonym: 1,4-Butandiol

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4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Seek medical attention.

If on skin:

Wash affected areas thoroughly with soap and water. Remove contaminated clothing. If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, unconsciousness, lethargy

Indication of any immediate medical attention and special treatment needed

Note to physician

Treat according to symptoms (decontamination, vital functions), no

known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons: water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon oxides, nitrogen oxides

The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.

Advice for fire-fighters

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Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas. Hands and/or face should be washed before breaks and at the end of the shift. When using do not eat, drink or smoke.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Stainless steel 1.4301 (V2), Stainless steel 1.4541, Stainless steel 1.4401, Stainless steel 1.4571, High density polyethylene (HDPE), Carbon steel (Iron) Unsuitable materials for containers: Paper/Fibreboard, Aluminium

Further information on storage conditions: Keep container tightly closed.

Storage stability:

Storage temperature: 27 - 49 °C Storage duration: 24 Months

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

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Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour respirator. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, butyl rubber, nitrile rubber (Buna N), fluoroelastomer (Viton), polyvinylchloride (Pylox), Consult with glove manufacturer for testing data., Protective glove selection must be based on the user's assessment of the workplace hazards.

Eve protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to minimize contact. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Store work clothing separately.

9. Physical and Chemical Properties

Form: oily, liquid odour: almost odourless

Odour threshold: Not determined due to potential health hazard by inhalation.

Colour: colourless

pH value: 7.2 - 7.9 (DIN 19268)

(500 g/l, 20 °C)

Melting point: 20.4 °C

(1,013 hPa) Literature data.

Freezing point: No data available.

boiling temperature: 230 °C

(1,013 hPa)

Flash point: 115 °C (DIN 51758, closed

cup)

Flammability: hardly combustible (derived from flash

point)

Lower explosion limit: For liquids not relevant for

classification and labelling. The lower explosion point may be 5 - 15 °C

below the flash point.

Upper explosion limit: For liquids not relevant for

classification and labelling.

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Autoignition: 385 °C (DIN 51794)

SADT: Study scientifically not justified.

Vapour pressure: 0.014 hPa (measured)

(25 °C) negligible

Density: 1.02 g/cm3

(20 °C, 1,013 hPa)

liquid

1.0202 g/cm3 (15 °C, 1,013 hPa) 0.9980 g/cm3 (50 °C, 1,013 hPa)

Relative density: 1.02

(20 °C, 1,013 hPa)

(in liquid state), Literature data.

Vapour density: > 1 (estimated)

(20°C)

Heavier than air.

Partitioning coefficient n- -0.88 (OECD Guideline

octanol/water (log Pow): (25 °C) 107)

The data refers to the undissociated

form of the substance.

Self-ignition not self-igniting

temperature:

Thermal decomposition: 115 °C, 80 kJ/kg (DSC (DIN 51007))

It is not a self-decompositionable substance.

Viscosity, dynamic: 84.9 mPa.s

(20 °C)

Particle size: The substance / product is marketed

or used in a non solid or granular

form.

Solubility in water: > 1,000 g/l

(25 °C) miscible

Miscibility with water: miscible in all proportions

Solubility (qualitative): soluble

solvent(s): organic solvents,

Molar mass: 90.12 g/mol

Evaporation rate: Value can be approximated from

Henry's Law Constant or vapor

pressure.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

Not corrosive to: iron Aluminium Stainless steel

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

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Reactions with

Reaction with:

water

water/air:

Flammable gases: no Toxic gases: no Corrosive gases: no

Formation of

flammable gases:

Remarks:

Forms no flammable gases in the

presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable. Reacts with oxidizing agents.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame.

Incompatible materials

strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, carbon dioxide

Possible decomposition products: tetrahydrofuran

Thermal decomposition:

115 °C (DSC (DIN 51007))

It is not a self-decompositionable substance.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Information on: 1,4-Butanediol

Information on: 1,4-Butanediol

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<u>Oral</u>

Type of value: LD50 Species: rat (male/female)

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Value: 1,500 mg/kg (BASF-Test)

Inhalation

Type of value: LC50
Species: rat (male)
Value: > 15 mg/l (other)
Exposure time: 4 h
An aerosol was tested.

Dermal

Type of value: LD50 Species: rat (male/female)

Value: > 2,000 mg/kg (BASF-Test)

The value meets the highest applied test concentration. No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Possible narcotic effects (drowsiness or dizziness).

Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

Information on: 1,4-Butanediol

Skin

Species: rabbit Result: non-irritant Method: Draize test

Eye

Species: rabbit Result: non-irritant Method: Draize test

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Guinea pig maximization test

Species: guinea pig Result: Non-sensitizing.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

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Carcinogenicity

Assessment of carcinogenicity: In long-term animal studies in which the substance was given by gavage in high doses, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The results were determined in a Screening test (OECD 421/422).

Teratogenicity

Assessment of teratogenicity: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Medical conditions aggravated by overexposure

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) > 30,000 mg/l, Pimephales promelas (OECD 203; ISO 7346; 84/449/EWG, C.1, static) The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates

EC50 (48 h) 813 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants

EC50 (72 h) > 500 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9) Nominal concentration.

EC10 (72 h) 76 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static) Nominal concentration.

Chronic toxicity to fish

No data available.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) > 85 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)

Assessment of terrestrial toxicity

No data available.

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Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 activated sludge, industrial/EC20 (30 min): > 788 mg/l Nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H2O)

Readily biodegradable (according to OECD criteria).

Elimination information

approx. 74 - 96 % BOD of the ThOD (14 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, activated sludge)

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

 $t_{1/2} > 365 d$, 0 % (pH value 4), (OECD Guideline 111, pH 4)

 $t_{1/2} > 365 d$, 0 % (pH value 7), (OECD Guideline 111, pH 7)

 $t_{1/2} > 365 d$, 0 % (pH value 9), (OECD Guideline 111, pH 9)

Bioaccumulative potential

Assessment bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential

No data available.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen(AOX):

This product contains no organically-bound halogen.

13. Disposal considerations

Waste disposal of substance:

Do not discharge substance/product into sewer system. Dispose of in a RCRA-licensed facility. Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

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14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

NFPA Hazard codes:

Health: 2 Fire: 1 Reactivity: 0 Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox. 4 (oral) Acute toxicity

STOT SE 3 (May cause Specific target organ toxicity — single exposure

drowsiness and dizziness.)

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2025/03/28

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