

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: BUTYL CELLOSOLVE (EB)
CAS-No.	: 111-76-2
Product code	: TS103
Formula	: C6H14O2
Synonyms	: 2-BE / 2-butoxy-1-ethanol / 2-butoxyethanol / 2-n-butoxyethanol / 2-normal-butoxyethanol / 3-oxa-1-heptanol / A13-0993 / beta-butoxyethanol / BGE / breaxit 8002 / BUCS / butoxyethanol / butoxyethanol, normal- / butyl cellosolve / butylcellu-sol / butylescosolve / butylethyleneglycol, ortho- / butylglycol ether / butylglycol-cellosolve / butyljaysolve / butylmonoetherglycol / butyloxitol (=2-butoxyethanol) / Caswell No. 121 / CHIMEC NR / COREXIT 7610 / DOWANOL EB / EGBE / EKTASOLVE EB / ethanol, 2-butoxy- / ethylene glycol monobutyl ether / ethylene glycol n-butyl ether / ethylene glycol normal-butyl ether / ethyleneglycol n-butyl ether / ethyleneglycolmonobutyl ether / ethyleneglycolmono-normal-butyl ether / ethyleneglycol-normal-butyl ether / GAFCOL EB / glycol ether EB / glycol ether EB acetate / glycolbutyl ether / glycolmonobutyl ether / jeffersol EB / minex BDH / monobutyl ether of ethyleneglycol / monobutylglycol ether / monoethyleneglycolmonobutyl ether / n-butoxyethanol / normal-butoxyethanol / O-butylethyleneglycol / ortho-butylethyleneglycol / POLY-SOLV EB / Substances with a flash-point above 60 °C and not more than 100 °C / Substances with a flash-point above 60 °C and not more than 100 °C, which do not belong to another class
BIG no	: 50483

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Solvent Chemical intermediate
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1.3. Details of the supplier of the safety data sheet

Crown Paint Company
1801 W. Sheridan
Oklahoma City, 73106 - United States
T 1-405-232-8580

1.4. Emergency telephone number

Emergency number	: In the event of an emergency involving dangerous goods: in Canada call CANUTEC at 613-996-6666 or *666 on a cellular phone. in the US call CHEMTREC at 800-424-9300 (Account Name for US is Polyglass Coatings)
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 4	H227 - Combustible liquid
Acute Tox. 4 (Oral)	H302 - Harmful if swallowed
Acute Tox. 4 (Dermal)	H312 - Harmful in contact with skin
Acute Tox. 4 (Inhalation:dust,mist)	H332 - Harmful if inhaled
Skin Irrit. 2	H315 - Causes skin irritation
Eye Irrit. 2	H319 - Causes serious eye irritation

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: H227 - Combustible liquid H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled H315 - Causes skin irritation

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- Precautionary statements (GHS-US)
- H319 - Causes serious eye irritation
 - P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 - P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 - P264 - Wash thoroughly after handling
 - P270 - Do not eat, drink or smoke when using this product.
 - P271 - Use only outdoors or in a well-ventilated area.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 - P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell
 - P302+P352 - IF ON SKIN: Wash with plenty of soap and water
 - P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 - P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 - P312 - Call a poison center/doctor/physician if you feel unwell
 - P321 - Specific treatment (see 4.1. First aid procedures on this label)
 - P322 - Specific treatment (see supplemental first aid instruction on this label)
 - P330 - Rinse mouth.
 - P332+P313 - If skin irritation occurs: Get medical advice/attention.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P362+P364 - Take off contaminated clothing and wash it before reuse.
 - P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂) to extinguish
 - P403+P235 - Store in a well-ventilated place. Keep cool.
 - P501 - Dispose of contents/container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	GHS-US classification
BUTYL CELLOSOLVE (EB) (Main constituent)	(CAS-No.) 111-76-2	100	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general
- : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.
- First-aid measures after inhalation
- : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact
- : Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.
- First-aid measures after eye contact
- : Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion
- : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation
- : Runny nose. EXPOSURE TO HIGH CONCENTRATIONS: Metal taste. Central nervous system depression. Headache. Nausea. Dizziness. Mental confusion. Disturbances of consciousness.

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Symptoms/effects after skin contact	: Tingling/irritation of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Symptoms similar to those listed under inhalation.
Symptoms/effects after eye contact	: Irritation of the eye tissue.
Symptoms/effects after ingestion	: Risk of aspiration pneumonia. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation. Change in the haemogramme/blood composition. Change in urine composition.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Tingling/irritation of the skin.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Alcohol-resistant foam. BC powder. Carbon dioxide.
Unsuitable extinguishing media	: Container may slop over if solid jet (water/foam) is applied.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Material presenting a fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: Upon combustion: CO and CO ₂ are formed. On exposure to air: peroxidation resulting in increased fire or explosion risk. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases: (increased) risk of fire.

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Face-shield. Protective clothing. See "Material-Handling" to select protective clothing.
Emergency procedures	: Mark the danger area. No naked flames. Wash contaminated clothes.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply.
Methods for cleaning up	: Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle and open the container with care. Cool before opening. Thoroughly clean/dry the installation before use. Use earthed equipment. Keep away from naked flames/heat. At temperature > flashpoint: use spark-/explosionproof appliances. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Before use: check for peroxides and eliminate them. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
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7.2. Conditions for safe storage, including any incompatibilities

Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) bases.
Storage area	: Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Ventilation at floor level. Fireproof storeroom. Provide the tank with earthing. May be stored under nitrogen. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: hermetical. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: steel. stainless steel. nickel. polyethylene. polypropylene. glass. MATERIAL TO AVOID: aluminium.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BUTYL CELLOSOLVE (EB) (111-76-2)		
ACGIH	ACGIH TWA (ppm)	20 ppm (2-Butoxyethanol (EGBE); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	240 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm

8.2. Exposure controls

Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: butyl rubber. viton. GIVE GOOD RESISTANCE: polyethylene. tetrafluoroethylene. polyethylene/ethylenevinylalcohol. GIVE LESS RESISTANCE: neoprene. nitrile rubber. PVA. GIVE POOR RESISTANCE: styrene-butadiene rubber. natural rubber. PVC.
Hand protection	: Gloves.
Eye protection	: Face shield.
Skin and body protection	: Protective clothing.
Respiratory protection	: Wear gas mask with filter type A if conc. in air > exposure limit.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
	: No data available
	: No data available
Odor threshold	: 0.10 - 0.48 ppm 0.5 - 2.3 mg/m ³
pH	: No data available
Melting point	: -75 °C
Freezing point	: No data available
Boiling point	: 171 °C (Test data)
Critical temperature	: 368 °C
Critical pressure	: 32416 hPa
Flash point	: 67 °C
Relative evaporation rate (butyl acetate=1)	: 0.1
Relative evaporation rate (ether=1)	: 89
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: 1.17 hPa (25 °C)
Relative density	: 0.9 (20 °C; Test data)
Relative vapor density at 20 °C	: 4.1

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Relative density of saturated gas/air mixture	: 1
Specific gravity / density	: 902 kg/m ³
Molecular mass	: 118.17 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in oils/fats. Soluble in aromatic hydrocarbons. Soluble in aliphatic hydrocarbons. Soluble in heptane. Soluble in tetrachloroethane. Water: Complete Ethanol: Complete Ether: Complete Acetone: Complete
Log Pow	: 0.81 (Test data; 20 °C)
Auto-ignition temperature	: 230 °C
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.0033 Pa.s (20 °C; Test data)

9.2. Other information

Saturation concentration	: 5.8 g/m ³
VOC content (Regulatory - Less water and exempt solvents)	: 100 % :
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Slightly volatile. Neutral reaction. May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO₂ are formed. On exposure to air: peroxidation resulting in increased fire or explosion risk. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases: (increased) risk of fire.

10.2. Chemical stability

Unstable on exposure to air.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

BUTYL CELLOSOLVE (EB) (111-76-2)	
LD50 oral rat	1746 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	2.2 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	450 ppm/4h (Rat; Experimental value)
ATE US (oral)	1746 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	450 ppmV/4h
ATE US (vapors)	2.2 mg/l/4h
ATE US (dust, mist)	2.2 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: No data available

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Serious eye damage/irritation	: Causes serious eye irritation. pH: No data available
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

BUTYL CELLOSOLVE (EB) (111-76-2)	
IARC group	3 - Not Classifiable
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: Runny nose. EXPOSURE TO HIGH CONCENTRATIONS: Metal taste. Central nervous system depression. Headache. Nausea. Dizziness. Mental confusion. Disturbances of consciousness.
Symptoms/effects after skin contact	: Tingling/irritation of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Symptoms similar to those listed under inhalation.
Symptoms/effects after eye contact	: Irritation of the eye tissue.
Symptoms/effects after ingestion	: Risk of aspiration pneumonia. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation. Change in the haemogramme/blood composition. Change in urine composition.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Tingling/irritation of the skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Classification concerning the environment: not applicable.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). TA-Luft Klasse 5.2.5.
Ecology - water	: Mild water pollutant (surface water). Groundwater pollutant. Not harmful to fishes. Not harmful to invertebrates. Not harmful to algae.

BUTYL CELLOSOLVE (EB) (111-76-2)	
LC50 fish 1	1474 ppm (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Static system; Fresh water; Experimental value)
EC50 Daphnia 1	1550 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	911 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
Threshold limit algae 2	88 mg/l (NOEC; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

BUTYL CELLOSOLVE (EB) (111-76-2)	
Persistence and degradability	Readily biodegradable in water. Low potential for adsorption in soil. Photooxidation in the air.

12.3. Bioaccumulative potential

BUTYL CELLOSOLVE (EB) (111-76-2)	
Log Pow	0.81 (Test data; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

BUTYL CELLOSOLVE (EB) (111-76-2)	
Surface tension	0.065 N/m (20 °C; Calculated value)

12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. May be discharged to wastewater treatment installation.
- Additional information : LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

Transportation of Dangerous Goods

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

BUTYL CELLOSOLVE (EB) (111-76-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

BUTYL CELLOSOLVE (EB) (111-76-2)

State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
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California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Revision date : 06/12/2019

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Full text of H-phrases:

H227	Combustible liquid
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled

NFPA health hazard

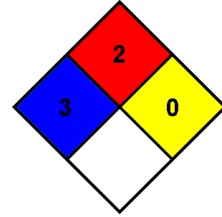
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US Endura

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