

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Product name : **Glass Cleaner Concentrate 9005**
 Product code : 9005

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

Use of the substance/mixture : Glass Cleaner

1.3. Details of the supplier of the safety data sheet

Flo-Kem
 19402 Susana Rd.
 Rancho Dominguez, CA 90221 - USA
 T 310-632-7124 - F 310-631-7496
<http://www.flo-kem.com>

1.4. Emergency telephone number

Emergency number : CHEMTEL: 800-255-3924

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 4 H227
 Skin Irrit. 2 H315
 Eye Irrit. 2A H319

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms :



GHS07

Signal word :

Warning

Hazard statements :

Combustible liquid.
 Causes skin irritation.
 Causes serious eye irritation.

Precautionary statements :

Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
 Wash hands and forearms thoroughly after handling.
 Wear eye protection, protective gloves, protective clothing.
 If on skin: Wash with plenty of water.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If skin irritation occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Take off contaminated clothing and wash before reuse.
 In case of fire: Use alcohol resistant foam, BC-powder, carbon dioxide (CO2), dry chemical, sand to extinguish.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with Local, State, and Federal regulations.

2.3. Hazard not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

(NOTE: If component displays the * (asterisk) symbol, the following statement applies.)

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
2-butoxyethanol	(CAS No) 111-76-2	10 - 15	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
2-propanol	(CAS No) 67-63-0	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

(NOTE: If component displays the * (asterisk) symbol, the following statement applies.)

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: If skin irritation or rash occurs: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation persists, get medical attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: FOLLOWING SYMPTOMS MAY APPEAR LATER: Irritation of the gastric/intestinal mucosa. Irritation of the oral mucous membranes. Nausea.

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	: Alcohol-resistant foam. BC powder. Carbon dioxide. Dry chemical powder. Sand/earth.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Although product has a flash point <200° F, it is an aqueous solution and does not sustain combustion.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Isolate from fire, if possible, without unnecessary risk.
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6.1.1. For non-emergency personnel

Protective equipment : Protective goggles.
Protective gloves.
Protective clothing.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Wash down leftovers with plenty of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Do not breathe mist, vapors. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Observe normal hygiene standards. Provide good ventilation in process area to prevent formation of vapor. Provide local exhaust or general room ventilation. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and forearms thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. Comply with applicable regulations.

Incompatible products : Oxidizing agent.

Storage area : Store in a cool, dry well-ventilated area. Keep container tightly closed when not in use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-propanol (67-63-0)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	200 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	980 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
OSHA	OSHA PEL (STEL) (mg/m ³)	1225 mg/m ³
OSHA	OSHA PEL (STEL) (ppm)	500 ppm

2-butoxyethanol (111-76-2)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	ACGIH STEL (ppm)	20 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	97 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	20 ppm

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

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Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. In case of insufficient ventilation, wear suitable respiratory equipment.
Other information	: When using, do not eat, drink or smoke.
Appropriate engineering controls	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear blue
Odor	: Alcohol
Odor threshold	: No data available
pH	: 8 - 9
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 212 °F
Flash point	: > 140 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Specific Gravity @ 77° F	: 0.985 - 1.005
Solubility	: Soluble in water.
Partition Coefficient n-Octanol-Water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available

9.2. Other information

VOC content	: < 110 g/l CARB VOC
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under recommended conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high or low temperatures. Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Sulfur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
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2-propanol (67-63-0)	
LD50 oral rat	5045 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 5840 mg/kg bodyweight; Rat)
LD50 dermal rabbit	12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)
LC50 inhalation rat (mg/l)	73 mg/l/4h (Rat)

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2-propanol (67-63-0)	
ATE US (oral)	5045.000 mg/kg body weight
ATE US (dermal)	12870.000 mg/kg body weight
ATE US (vapors)	73.000 mg/l/4h
ATE US (dust, mist)	73.000 mg/l/4h
2-butoxyethanol (111-76-2)	
LD50 oral rat	530 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 1746 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	435 mg/kg body weight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity; 435 mg/kg bodyweight; Rabbit; Weight of evidence; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	2.17 mg/l/4h (Rat; Experimental value; 2.35 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	450-486,Rat; Weight of evidence
ATE US (oral)	530.000 mg/kg body weight
ATE US (dermal)	435.000 mg/kg body weight
ATE US (gases)	700.000 ppmV/4h
ATE US (vapors)	2.170 mg/l/4h
ATE US (dust, mist)	2.170 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation. pH: 8 - 9
Serious eye damage/irritation	: Causes serious eye irritation. pH: 8 - 9
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
	Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified

2-propanol (67-63-0)	
IARC group	3 - Not Classifiable

2-butoxyethanol (111-76-2)	
IARC group	3 - Not Classifiable

Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: FOLLOWING SYMPTOMS MAY APPEAR LATER: Irritation of the gastric/intestinal mucosa. Irritation of the oral mucous membranes. Nausea.

SECTION 12: Ecological information

12.1. Toxicity

2-propanol (67-63-0)	
LC50 fish 1	4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna)
LC50 fish 2	9640 mg/l (96 h; Pimephales promelas; Lethal)
EC50 Daphnia 2	13299 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	> 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)
Threshold limit algae 2	1800 mg/l (72 h; Algae; Cell numbers)
2-butoxyethanol (111-76-2)	
LC50 fish 1	116 ppm (96 h; Cyprinodon variegatus; Nominal concentration)
EC50 Daphnia 1	1700 mg/l (48 h; Daphnia sp.; Nominal concentration)
LC50 fish 2	1341 ppm (96 h; Lepomis macrochirus)

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2-butoxyethanol (111-76-2)	
EC50 Daphnia 2	1720 mg/l (24 h; Daphnia magna)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	900 mg/l (168 h; Scenedesmus quadricauda)
Threshold limit algae 2	35 mg/l (192 h; Microcystis aeruginosa)

12.2. Persistence and degradability

2-propanol (67-63-0)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.19 g O ₂ /g substance
Chemical oxygen demand (COD)	2.23 g O ₂ /g substance
ThOD	2.40 g O ₂ /g substance
BOD (% of ThOD)	0.49 % ThOD

2-butoxyethanol (111-76-2)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.71 g O ₂ /g substance
Chemical oxygen demand (COD)	2.20 g O ₂ /g substance
ThOD	2.305 g O ₂ /g substance
BOD (% of ThOD)	0.31 % ThOD

12.3. Bioaccumulative potential

2-propanol (67-63-0)	
Log Pow	0.05 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

2-butoxyethanol (111-76-2)	
Log Pow	0.81 (Experimental value; BASF test; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with Local, State, and Federal regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN Number

UN-No.(DOT) : Not Regulated
Other information : Although product has a flash point <200° F, it is an aqueous solution and does not sustain combustion.

14.2. UN proper shipping name

DOT Proper Shipping Name : Not Regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory

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2-propanol (67-63-0)

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

SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard Fire hazard
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2-butoxyethanol (111-76-2)

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

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
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15.2. International regulations

CANADA

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

15.3. US State regulations

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

Abbreviations Legend:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness

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