

**SECTION 1: Product and company identification**

Product name : Glass Cleaner Aerosol  
Use of the substance/mixture : Cleaner  
Product code : 8312  
Company : Total Solutions  
P.O. Box 240014  
Milwaukee, WI 53224 - USA  
T (414) 354-6417  
Emergency number : Chemtec: (800) 424-9300

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification (GHS-US)**

Compressed gas H280  
Full text of H-phrases: see section 16

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : Contains gas under pressure; may explode if heated  
Precautionary statements (GHS-US) : Protect from sunlight. Store in a well-ventilated place

**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. Substance**

Not applicable  
Full text of H-phrases: see section 16

**3.2. Mixture**

Name	Product identifier	%	Classification (GHS-US)
Other components below reportable levels	(CAS No) Mixture	90 - 100	Not classified
ethanol	(CAS No) 64-17-5	2.5 - 10	Flam. Liq. 2, H225 STOT SE 3, H336
Glycol Ether EB	(CAS No) 111-76-2	2.5 - 10	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT RE 2, H373 Asp. Tox. 1, H304
butane	(CAS No) 106-97-8	1 - 2.5	Flam. Gas 1, H220 Compressed gas, H280
propane	(CAS No) 74-98-6	1 - 2.5	Flam. Gas 1, H220 Compressed gas, H280

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.  
First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.  
First-aid measures after skin contact : Take victim to a doctor if irritation persists.

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- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 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 with water.

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

- Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water fog. Foam. Dry chemical powder. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

#### 5.2. Special hazards arising from the substance or mixture

- Explosion hazard : Contains gas under pressure; may explode if heated.
- Reactivity : Upon combustion: CO and CO<sub>2</sub> are formed.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate unnecessary personnel. Gas is denser than air. May accumulate in low areas e.g. close to the ground. Stay upwind/keep distance from source.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Advise local authorities if considered necessary. Do not enter without an appropriate protective equipment.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment.
- Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

#### 6.2. Environmental precautions

Avoid discharge to the environment.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Eliminate every possible source of ignition. NO open flames, NO sparks, and NO smoking. Stop leak if safe to do so. Move the cylinder to a safe and open area if the leak is irreparable.
- Methods for cleaning up : Clean contaminated surfaces with an excess of water. Carefully collect the spill/leftovers.

#### 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 : Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any incandescent material. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. . Ground/bond container and receiving equipment. Do not re-use empty containers. Avoid contact with skin, eyes and clothing. Observe normal hygiene standards. Use only outdoors or in a well-ventilated area.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Do not puncture, incinerate or crush.
- Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep only in the original container in a cool, well ventilated place away from: sparks, open flames, excessive heat.
- Incompatible materials : Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C.
- Storage area : Keep out of direct sunlight. Flam. Aerosol 1.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

butane (106-97-8)		
ACGIH	ACGIH TWA (ppm)	1000 ppm

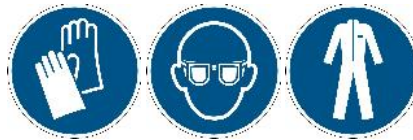
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<b>butane (106-97-8)</b>		
ACGIH	ACGIH STEL (ppm)	1000 ppm
<b>ethanol (64-17-5)</b>		
ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
<b>Glycol Ether EB (111-76-2)</b>		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
<b>propane (74-98-6)</b>		
ACGIH	ACGIH TWA (ppm)	1000 ppm
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

### 8.2. Exposure controls

Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Safety glasses. Protective clothing.



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Aerosol. Light yellow.
Odor	: characteristic
Odor threshold	: No data available
pH	: 9.1 - 10.1 Estimated
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 212 °F Estimated
Flash point	: -156 °F Propellant estimated
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 0.977 - 0.997 g/ml
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Upon combustion: CO and CO<sub>2</sub> are formed.

### 10.2. Chemical stability

Stable under normal conditions.

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### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur. No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No flames, No sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Oxidizing agents.

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>ethanol (64-17-5)</b>	
LD50 oral rat	10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)
ATE CLP (oral)	10740.000 mg/kg body weight

<b>Glycol Ether EB (111-76-2)</b>	
LD50 oral rat	1300 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	1300.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
ATE CLP (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation : Not classified.  
pH: 9.1 - 10.1 Estimated

Serious eye damage/irritation : Not classified.  
pH: 9.1 - 10.1 Estimated

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

<b>Glycol Ether EB (111-76-2)</b>	
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.

<b>Glycol Ether EB (111-76-2)</b>	
LOAEL (oral,rat,90 days)	69 mg/kg bodyweight/day Target organ: liver
NOAEL (dermal,rat/rabbit,90 days)	150 mg/kg bodyweight/day

Aspiration hazard : Not classified

Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>ethanol (64-17-5)</b>	
LC50 fish 1	14200 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	9300 mg/l (48 h; Daphnia magna)
LC50 fish 2	13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 1	65 mg/l (72 h; Protozoa)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa; Growth rate)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)
<b>Glycol Ether EB (111-76-2)</b>	
LC50 fish 1	1474 mg/l Oncorhynchus mykiss

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Glycol Ether EB (111-76-2)	
EC50 Daphnia 1	100 mg/l Water flea
ErC50 (algae)	1840 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	> 100 mg/l
NOEC chronic crustacea	100 mg/l daphnid

### 12.2. Persistence and degradability

ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.70 g O <sub>2</sub> /g substance
ThOD	2.10 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.43 % ThOD

### 12.3. Bioaccumulative potential

ethanol (64-17-5)	
BCF fish 1	1 (72 h; Cyprinus carpio)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Waste treatment methods : Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container to comply with local/regional/national/international regulations.
- Waste disposal recommendations : Container under pressure. Do not drill or burn even after use. Dispose of contents/container to comply with local/regional/national regulations.

## SECTION 14: Transport information

### Department of Transportation (DOT)

- Transport document description : UN1950 Aerosols (non-flammable, (each not exceeding 1 L capacity)), 2.2
- UN-No.(DOT) : UN1950
- Proper Shipping Name (DOT) : Aerosols  
non-flammable, (each not exceeding 1 L capacity)
- Transport hazard class(es) (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
- Hazard labels (DOT) : 2.2 - Non-flammable gas



- DOT Packaging Non Bulk (49 CFR 173.xxx) : None
- DOT Packaging Bulk (49 CFR 173.xxx) : None
- DOT Special Provisions (49 CFR 172.102) :
- DOT Packaging Exceptions (49 CFR 173.xxx) : 306
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg
- DOT Vessel Stowage Location : A
- DOT Vessel Stowage Other : 25 - Shade from radiant heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

### Additional information

- Other information : This product may be eligible to be shipped as a Limited Quantity or Consumer Commodity ORM-D utilizing the exception found at 49 CFR 173.306.

### ADR

No additional information available

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### Transport by sea

UN-No. (IMDG)	: UN1950
Proper Shipping Name (IMDG)	: Aerosols, non-flammable
Class (IMDG)	: 2.2 - Non-flammable, non-toxic gases

### Air transport

UN-No.(IATA)	: UN1950
Proper Shipping Name (IATA)	: Aerosols, non-flammable
Class (IATA)	: 2.2 - Gases : Non-flammable, non-toxic

### SECTION 15: Regulatory information

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

2-butoxyethanol	CAS No 111-76-2	1.0 – 5.0
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butane (106-97-8)
Not listed on SARA Section 313 (Specific toxic chemical listings)

propane (74-98-6)
Not listed on SARA Section 313 (Specific toxic chemical listings)

California Proposition 65 - This product does not contain a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

### SECTION 16: Other information

Full text of H-phrases:

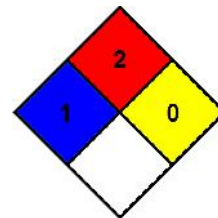
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H225	Highly flammable liquid and vapor
H227	Combustible liquid
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H373	May cause damage to organs through prolonged or repeated exposure

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**TOTAL**  
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NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.  
NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.  
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

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