

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date: 13 March 2017

Revision: 13 March 2017

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

1.1 Product identifier

Trade name: **Mirror Image v.3**

Article number: 101277

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

No further relevant information available.

Application of the substance / the mixture: Glass Cleaner

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:

Theochem Laboratories
7373 Rowlett Park Drive
Tampa, FL 33610
Phone: 813-237-6463



1.4 Emergency telephone number:

ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified as hazardous according to OSHA GHS regulations within the United States.

The product is not classified as hazardous according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

This product does not have a classification according to the CLP regulation.

The product is not classified as hazardous according to OSHA GHS regulations within the United States.

Hazard pictograms Not Regulated

Signal word Not Regulated

Hazard-determining components of labelling: None.

Hazard statements Not Regulated

Precautionary statements Not Regulated.

Additional information:

Safety data sheet available on request.

NFPA ratings (scale 0 - 4)



Health = 0

Fire = 0

Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Components:**

None in reportable quantities.

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43-XXXX	ethanol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319	<5%
CAS: 111-76-2 EINECS: 203-905-0 Index number: 603-014-00-0 Reg.nr.: 01-2119475108-36-XXXX	2-butoxyethanol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	<2%
CAS: 1336-21-6 EINECS: 215-647-6 Index number: 007-001-01-2 Reg.nr.: 01-2119982985-14-XXXX	ammonia, aqueous solution ⚠ Skin Corr. 1B, H314 ⚠ Aquatic Acute 1, H400	<1%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentages are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

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- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions** Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.

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- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidising agents.
Do not store together with acids.
- **Further information about storage conditions:**
Protect from frost.
Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

64-17-5 ethanol

AGW (Germany)	Long-term value: 960 mg/m ³ , 500 ppm 2(II);DFG, Y
PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm

111-76-2 2-butoxyethanol

IOELV (EU)	Short-term value: 246 mg/m ³ , 50 ppm Long-term value: 98 mg/m ³ , 20 ppm Skin
AGW (Germany)	Long-term value: 49 mg/m ³ , 10 ppm 4(II);H, Y, AGS
PEL (USA)	Long-term value: 240 mg/m ³ , 50 ppm Skin
REL (USA)	Long-term value: 24 mg/m ³ , 5 ppm Skin
TLV (USA)	Long-term value: 97 mg/m ³ , 20 ppm BEI

1336-21-6 ammonia, aqueous solution

AGW (Germany)	Long-term value: 14 mg/m ³ , 20 ppm 2(I);DFG, EU, Y
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- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.

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Ingredients with biological limit values:**111-76-2 2-butoxyethanol**

BGW (Germany)	100 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten Parameter: Butoxyessigsäure
	200 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten Parameter: Butoxyessigsäure (nach Hydrolyse)
BEI (USA)	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Respiratory protection: Not required.**Protection of hands:**

Gloves are advised for repeated or prolonged contact.

Wear protective gloves to handle contents of damaged or leaking units.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves: Rubber gloves**Eye protection:**

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

Body protection: Protection may be required for spills.**Limitation and supervision of exposure into the environment:**

No further relevant information available.

Risk management measures: See Section 7 for additional information.

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Appearance

Form:	Liquid
Colour:	Greenish-blue.
Odour:	Ammonia-like
Odour threshold:	Not determined.

pH-value:	10,00 - 12,00
Melting point/freezing point:	Not determined.
Initial boiling point and boiling range:	Not determined.

Flash point:	Not applicable - does not support sustained combustion.
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Flammability (solid, gas):	Not applicable.
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Auto/Self-ignition temperature:	Not determined.
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Decomposition temperature:	Not determined.
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Explosive properties:	Product does not present an explosion hazard.
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· Explosion limits

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure:	Not determined.
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Density:	0,99 - 1,00 g/cm ³ (8,262 - 8,345 lbs/gal)
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined.

Solubility in / Miscibility with water:	Fully miscible.
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Partition coefficient: n-octanol/water:	Not determined.
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· Viscosity

Dynamic:	Not determined.
Kinematic:	Not determined.

9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

10.1 Reactivity	No further relevant information available.
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· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions	Reacts with strong acids and oxidising agents.
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- **10.4 Conditions to avoid** Excessive heat.
- **10.5 Incompatible materials** Oxidisers
- **10.6 Hazardous decomposition products**
Possible in traces.
Carbon monoxide and carbon dioxide
Sulphur oxides (SOx)
Ammonia

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

111-76-2 2-butoxyethanol

Oral	LD50	1480 mg/kg (rat)
Dermal	LD50	1001-2000 mg/kg (rat) (Estimated)
Inhalative	LC50/4h	450 ppm (rat)

- **Primary irritant effect**
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Slight irritant effect on eyes.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer):

64-17-5	ethanol	1
123-91-1	1,4-dioxane	2B

- **NTP (National Toxicology Program):**
Present in trace quantities.

123-91-1	1,4-dioxane	R
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· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable routes of exposure:

Ingestion.
Inhalation
Eye contact.
Skin contact.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

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- **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** After neutralisation a reduction of the harming action may be recognised.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Smaller quantities can be disposed of with household waste.
Small amounts may be diluted with plenty of water and washed away. Dispose of larger amounts in accordance with Local Authority requirements.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|---------------------------------------|---------------|
| · 14.1 UN-Number | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.2 UN proper shipping name | |
| · DOT, ADR, IMDG, IATA | Not Regulated |

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- | | |
|----------------------------------------------------------------------------------|-----------------|
| · 14.3 Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Not Regulated |
| · 14.4 Packing group | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | |
| · Danger code (Kemler): | - |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | |
| | Not applicable. |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- United States (USA)
- SARA

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

111-76-2 | 2-butoxyethanol

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65 (California):

· Chemicals known to cause cancer:

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.
Present in trace quantities: 123-91-1.

64-17-5 | ethanol

123-91-1 | 1,4-dioxane

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5 | ethanol

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· **Carcinogenic Categories**· **EPA (Environmental Protection Agency)**

111-76-2	2-butoxyethanol	NL
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· **IARC (International Agency for Research on Cancer)**

64-17-5	ethanol	1
123-91-1	1,4-dioxane	2B

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Present in trace quantities.

123-91-1	1,4-dioxane
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· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **National regulations:**· **Other regulations, limitations and prohibitive regulations**· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
 H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H400 Very toxic to aquatic life.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic

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SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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