



Glass Cleaner

Safety Data Sheet

SECTION 1: Identification

1.1 Product identifier

Trade name **Hydrosilex Glass Cleaner**

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

Relevant identified uses General use

1.3 Details of the supplier of the safety data sheet

Safe R. World MSD LLC
5940 S Rainbow Blvd
Las Vegas NV 89118

info@Saferworlds.com

1.4 Emergency telephone number

Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hour emergency number

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
This mixture does not meet the criteria for classification.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
not required

2.3 Other hazards

Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
2-butoxy-1-ethanol	CAS No 111-76-2	1 - <3	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Flam. Liq. 4 / H227
Propan-2-ol	CAS No 67-63-0	1 - <3	Eye Irrit. 2 / H319 STOT SE 3 / H336 Flam. Liq. 2 / H225



Hazardous ingredients, Consideration of other advice

This table, if present, includes all GHS classified ingredients present above their cut-off limits, even if the finished product is not classified as hazardous by GHS.

Exact percentage of ingredients is withheld as a trade secret.

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first- aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.



SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of the effects

Protect against external exposure, such as

Frost

7.3 Specific end use(s)

See section 16 for a general overview.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	2-butoxyethanol	111-76-2	REL	5 (10 h)	24 (10 h)						NIOSH REL
US	2-butoxyethanol	111-76-2	TLV®	20							ACGIH® 2019
US	2-butoxyethanol	111-76-2	PEL	50	240						29 CFR 1910.1000
US	2-butoxyethanol (EGBE) (glycol monobutyl ether)	111-76-2	PEL (CA)	20	97						Cal/OSHA PEL
US	2-propanol	67-63-0	TLV®	200		400					ACGIH® 2019
US	isopropyl alcohol	67-63-0	PEL (CA)	400	980	500	1,225				Cal/OSHA PEL
US	isopropyl alcohol	67-63-0	REL	400 (10 h)	980 (10 h)	500	1,225				NIOSH REL
US	isopropyl alcohol	67-63-0	PEL	400	980						29 CFR 1910.1000

NotationCeiling-C
STELceiling value is a limit value above which exposure should not occur
short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Biological limit values						
Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	2-butoxyethanol	Butoxyacetic acid (BAA)	hydr, crea	BEI®	200 mg/g	ACGIH® 2019
US	isopropanol	acetone		BEI®	40 mg/l	ACGIH® 2019

Notationcrea
hydrcreatinine
hydrolysis

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-butoxy-1-ethanol	111-76-2	DNEL	75 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
2-butoxy-1-ethanol	111-76-2	DNEL	98 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Propan-2-ol	67-63-0	DNEL	888 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Propan-2-ol	67-63-0	DNEL	500 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
2-butoxy-1-ethanol	111-76-2	PNEC	8.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	0.88 mg/l	aquatic organisms	marine water	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	463 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	34.6 mg/kg	benthic organisms	sediment	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	3.13 mg/kg	terrestrial organisms	soil	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	9.1 mg/l	aquatic organisms	water	intermittent release
Propan-2-ol	67-63-0	PNEC	140.9 mg/l	aquatic organisms	freshwater	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	140.9 mg/l	aquatic organisms	marine water	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	2,251 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	552 mg/kg	benthic organisms	sediment	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	552 mg/kg	pelagic organisms	sediment	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	160 mg/kg	(top) predators	water	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	28 mg/kg	terrestrial organisms	soil	short-term (single instance)
Propan-2-ol	67-63-0	PNEC	140.9 mg/l	aquatic organisms	water	intermittent release

8.2 Exposure controls

Appropriate engineering controls

General ventilation.



Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	light green
Odor	fruity

Other safety parameters

pH (value)	5 – 7 (25 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	82.5 °C
Flash point	>100 °C at 101.3 kPa closed cup
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	4.3 kPa at 20 °C
Density	0.9953 g/ml
Vapor density	this information is not available

Solubility(ies)

- Water solubility	miscible in any proportion
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Glass Cleaner

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	230 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Temperature class (USA, acc. to NEC 500)	T2D (maximum permissible surface temperature on the equipment: 215°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This mixture does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
2-butoxy-1-ethanol	111-76-2	oral	1,746 mg/kg
2-butoxy-1-ethanol	111-76-2	inhalation: vapor	11 mg/4h



Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			
Name of substance	CAS No	Classification	Number
2-butoxy-1-ethanol	111-76-2	3	
Propan-2-ol	67-63-0	3	

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.



12.6 Other adverse effects

Endocrine disrupting potential
None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

- | | |
|--|---|
| 14.1 UN number | not subject to transport regulations |
| 14.2 UN proper shipping name | not assigned |
| 14.3 Transport hazard class(es) | not assigned |
| 14.4 Packing group | not assigned |
| 14.5 Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user | There is no additional information. |
| 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code | The cargo is not intended to be carried in bulk. |

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed



- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	CAS No	Remarks	Effective date
Propan-2-ol	67-63-0	only persons who manufacture by the strong acid process are subject, supplier notification not required	1986-12-31

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
water	7732-18-5	solvent	
2-butoxy-1-ethanol	111-76-2	co-solvent	OEHHA RELs
Propan-2-ol	67-63-0	alcohols	OEHHA RELs
proprietary low residue surfactant blend	not available	surfactant	

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
2-butoxy-1-ethanol		1022			1.0 %
Propan-2-ol	67-63-0				1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
2-butoxy-1-ethanol	111-76-2	A, O	skin
Propan-2-ol	67-63-0	A, N, O	

Legend

- A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
- N National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
- O Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division
- skin If a potential for absorption from skin contact merits special consideration, the word "skin" follows the substance name.

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
2-butoxy-1-ethanol	111-76-2		CA F2
Propan-2-ol	67-63-0		F3

Legend

- CA Carcinogenic
- F2 Flammable - Second Degree
- F3 Flammable - Third Degree



- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
ETHANOL, 2-BUTOXY-	111-76-2	
2-PROPANOL	67-63-0	E

Legend

E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
2-butoxy-1-ethanol	111-76-2	T
Propan-2-ol	67-63-0	T, F

Legend

F Flammability (NFPA®)

T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

VOC content

- Regulated Volatile Organic Compounds (VOC-EPA) 2.846 %
- Regulated Volatile Organic Compounds (VOC-Cal ARB) 2.846 %

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**National inventories**

Country	Inventory	Status
CA	DSL	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	not all ingredients are listed

Legend

DSL	Domestic Substances List (DSL)
REACH Reg.	REACH registered substances
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision**Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization



Abbr.	Descriptions of used abbreviations
IMDG	International Maritime Dangerous Goods Code
LHS	Lower hazard substance
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	Highly flammable liquid and vapor.
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.
H336	May cause drowsiness or dizziness.



SAFE R. WORLD MSD
PRODUCTS THAT MATTER

Glass Cleaner

Safety Data Sheet

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.