



1. Identification

Product identifier	WINDO-CLEAN+
Other means of identification	
SDS number	565N-26B
Product code	HIL00802
Recommended use	Window Cleaner
Recommended restrictions	For Labeled Use Only
Manufacturer/Importer/Supplier/	Distributor information
Manufacturer	
Company name	HILLYARD INDUSTRIES
Address	302 North Fourth St.
	St. Joseph, MO 64501

Contact person	Regulatory Affairs
Telephone number	(816) 233-1321 (Ext. 8285)
Fax	(816) 383-8485
E-mail	regulatoryaffairs@hillyard.com
Emergency telephone #	(800) 424-9300
	(Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals)

2. Hazard(s) identification

Health hazardsAcute toxicity, dermalCategory 4
Acute toxicity, inhalation Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Signal word Hazard statement

Flammable liquid and vapor. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled.

Precautionary statement Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Warning

Response	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep cool.
Disposal	Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements. CONTAINER DISPOSAL: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethylene glycol monobutyl ether		111-76-2	10 - < 20
Isopropyl Alcohol		67-63-0	5 - < 10
Propylene glycol monomethyl ether		107-98-2	5 - < 10
Other components below reportable	e levels		70 - < 80

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Water spray. Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.		
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.		
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.		
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.		
7. Handling and storage			
Precautions for safe handling	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapors and spray mists. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.		
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).		

8. Exposure controls/personal protection

Occupational exposure limits

Components	Туре	Value	
Ethylene glycol monobutyl ether (CAS 111-76-2)	PEL	240 mg/m3	
		50 ppm	
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m3	
		400 ppm	
US. ACGIH Threshold Limit Value	S		
Components	Туре	Value	
Ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	20 ppm	
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
Propylene glycol monomethyl ether (CAS 107-98-2)	STEL	100 ppm	
,	TWA	50 ppm	
US. NIOSH: Pocket Guide to Cher	nical Hazards		
Components	Туре	Value	
Ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	24 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Туре	Value	
		5 ppm	
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3	
,		500 ppm	
	TWA	980 mg/m3	
		400 ppm	
Propylene glycol monomethyl ether (CAS 107-98-2)	STEL	540 mg/m3	
,		150 ppm	
	TWA	360 mg/m3	
		100 ppm	

Biological limit values

Components	Value	Determinant	Specimen	Sampling Time
Ethylene glycol monobutyl ether (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*
sopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

Exposure guidelines

1			
US - California OELs: Skin d	lesignation		
Ethylene glycol monobutyl ether (CAS 111-76-2)		Can be absorbed through the skin.	
Propylene glycol monomethyl ether (CAS 107-98-2)		Can be absorbed through the skin.	
US - Minnesota Haz Subs: S	kin designation applies		
Ethylene glycol monobuty		Skin designation applies.	
US - Tennessee OELs: Skin	U		
Ethylene glycol monobuty		Can be absorbed through the skin.	
	Chemical Hazards: Skin desig		
Ethylene glycol monobuty		Can be absorbed through the skin.	
	or Air Contaminants (29 CFR		
Ethylene glycol monobuty	ا ether (CAS 111-76-2)	Can be absorbed through the skin.	
Appropriate engineering controls	applicable, use process enclos	Id be used. Ventilation rates should be matched to conditions. If sures, local exhaust ventilation, or other engineering controls to recommended exposure limits. If exposure limits have not been levels to an acceptable level.	
Individual protection measures,	such as personal protective e	quipment	
Eye/face protection	Wear safety glasses with side	shields (or goggles).	
Skin protection			
Hand protection	For prolonged or repeated skir	n contact use suitable protective gloves.	
Other	None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.		
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.		
Thermal hazards	None known.		
General hygiene considerations		vays observe good personal hygiene measures, such as washing I before eating, drinking, and/or smoking. Routinely wash work nent to remove contaminants.	
9. Physical and chemical p	properties		

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Appearance	Clear, dark purple liquid
Physical state	Liquid.
Form	Liquid.
Color	Dark purple
Odor	Mild solvent odor

Odor threshold	Not available
рН	6 - 8
Melting point/freezing point	Not available
Initial boiling point and boiling range	184 °F (84.44 °C) corr.
Flash point	> 101.0 °F (> 38.3 °C) Closed Cup
Evaporation rate	< 1 Ethyl ether = 1
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	plosive limits
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.5 mm Hg
Vapor density	1.5 Air=1
Relative density	0.98 at 77°F
Solubility(ies)	
Solubility (water)	100 % Complete
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.15 lb/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	> 97 %
VOC	30 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents. Isocyanates. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Harmful in contact with skin. Causes skin irritation.
	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Information on toxicological eff	fects
Acute toxicity	Harmful if inhaled. Harmful in contact with skin.

Product	Species	Test Results
WINDO-CLEAN+		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2625 mg/kg estimated
Inhalation	M	
LC50	Mouse	6565 mg/l, 4 Hours estimated
		4667 ppm, 7 Hours estimated
	Rat	3000 ppm, 4 Hours estimated
		732 mg/l, 4 Hours estimated
Oral		
LD50	Guinea pig	7.9 g/kg estimated
	Mouse	7.6 g/kg estimated
	Rabbit	2 g/kg estimated
	Rat	3732 mg/kg estimated
Components	Species	Test Results
Ethylene glycol monobutyl e	ther (CAS 111-76-2)	
<u>Acute</u>		
Dermal		
LD50	Rabbit	400 mg/kg
Inhalation		
LC50	Mouse	700 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD50	Guinea pig	1.2 g/kg
	Mouse	1.2 g/kg
	Rabbit	0.32 g/kg
	Rat	560 mg/kg
sopropyl Alcohol (CAS 67-6	63-0)	
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Oral		
LD50	Mouse	3600 mg/kg
	Rabbit	5.03 g/kg
	Rat	4.7 g/kg
Propylene glycol monometh	yl ether (CAS 107-98-2)	
Acute		
Dermal		
LD50	Rabbit	13 g/kg
Inhalation		
LC50	Guinea pig	15000 mg/l, 10 Hours
	Rat	54.6 mg/l, 4 Hours
Oral		
LD50	Dog	4.6 g/kg
	Mouse	10.8 g/kg
	Rabbit	5.3 g/kg
	Rat	5.71 g/kg
	1.00	

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitizatior	1	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall I	Evaluation of Carcinogenicity	
Ethylene glycol monobuty US. National Toxicology Pro	/l ether (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans. bgram (NTP) Report on Carcinogens	
Not listed. US. OSHA Specifically Regu	Ilated Substances (29 CFR 1910.1001-1050)	
Not regulated.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	May be harmful if absorbed through skin. Prolonged inhalation may be harmful.	
	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.	

12. Ecological information

			ironmentally hazardous. However, this does not exclude the Is can have a harmful or damaging effect on the environmer	
Product		Species	Test Results	
WINDO-CLEAN+				
Aquatic				
Crustacea	EC50	Daphnia	536.1516 mg/l, 48 hours estimated	
Fish	LC50	Fish	896.8746 mg/l, 96 hours estimated	
Components		Species	Test Results	
Ethylene glycol monobi	utyl ether (CAS 11	1-76-2)		
Aquatic				
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours	
Isopropyl Alcohol (CAS	67-63-0)			
Aquatic				
Fish	LC50	Western mosquitofish (Gambusia affin	is) > 1400 mg/l, 96 hours	
* Estimates for product	may be based on	additional component data not shown.		
ersistence and degradab	bility No data is	available on the degradability of this produce	ct.	
ioaccumulative potential	I			
Partition coefficient n	-octanol / water (log Kow)		
Ethylene glycol monobu	utyl ether	0.83		
Isopropyl Alcohol		0.05		
obility in soil	No data a	vailable.		
ther adverse effects	The produpotential.	uct contains volatile organic compounds whic	ch have a photochemical ozone creation	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

IATA	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Isopropyl Alcohol)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	
Environmental hazards	No.
ERG Code	128
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo	Allowed with restrictions.
aircraft	
Cargo aircraft only	Allowed with restrictions.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Isopropyl Alcohol)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not established.
Annex II of MARPOL 73/78 and	
the IBC Code	



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

Hazard categories

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No chemical

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Safe Drinking Water Act Not regulated. (SDWA)

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Isopropyl Alcohol (CAS 67-63-0)

Low priority

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Ethylene glycol monobutyl ether (CAS 111-76-2) Isopropyl Alcohol (CAS 67-63-0) Propylene glycol monomethyl ether (CAS 107-98-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
	nents of this product comply with the inventory requirements administered by the g	U U

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-29-2015
Revision date	08-25-2016
Version #	02
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
Disclaimer	No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products. HILLYARD cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.