


SAFETY DATA SHEET

Section 1 - Identification

Product Identifier	20X Glass and Window Cleaner Concentrate
Other means of identification	1325
Recommended use	Glass & Window Cleaner
Recommended restrictions	For commercial and industrial use only. This product is intended to be diluted prior to use.
Manufacturer / Importer / Supplier / Distributor Information	
Company Name	National Chemical Laboratories of PA, Inc.
Address	401 N. 10th Street - Philadelphia, PA 19123
Telephone	1 (215) 922-1200
Supplier Email	info@nclonline.com
Contact	CHEM-TEL
Emergency Phone	1 (800) 255-3924

Section 2 - Hazard(s) Identification

SDS Hazards and Warnings are based on the undiluted product. Refer to diluted SDS for Ready-To-Use Hazards and Warnings.

	Classification	Category	
Physical Hazards	Flammable Liquids	3	
Health Hazards	Serious eye damage/eye irritation	2	
	Skin corrosion/irritation	2	
	Specific target organ toxicity, single exposure	3	narcotic effects
OSHA defined hazards	Not Classified.		
Label Elements			
Hazard Symbol			
Signal Word	Danger		
Hazard Statement	Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.		
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 mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.		
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. If eye irritation persists: 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 container tightly closed. Keep cool. Store locked up.		
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.		
Hazard(s) not otherwise classified (HNOC)	None known.		

Section 3 - Composition/Information on ingredients

Mixture			
Hazardous Components	Ingredient Name	CAS #	%
	2-Propanol	67-63-0	20 - 25
	2-Butoxyethanol	111-76-2	10 - 15
	2-Amino Ethanol	141-43-5	1 - 5
Composition Comments	Components not listed are either non-hazardous or are below reportable limits.		

Section 4 - First-aid Measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
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Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms /effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. 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	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 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. Wash contaminated clothing before reuse.

Section 5 - Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO ₂).
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.
General fire hazards	Highly flammable liquid and vapor.
Specific Methods	Use standard firefighting procedures and consider the hazards of other involved materials.

Section 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 breathing mist or vapor. 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	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. 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. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

Section 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. When using do not smoke. 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 breathing mist or vapor. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. 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).

Section 8 - Exposure control/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Amino Ethanol (CAS 141-43-5)	TWA	6 mg/m ³ , 3 ppm
2-Butoxyethanol (CAS 111-76-2)	TWA	240 mg/m ³ , 50 ppm
2-Propanol (CAS 67-63-0)	TWA	980 mg/m ³ , 400ppm

US. ACGIH Threshold Limit Values

Component	Type	Value
2-Propanol (CAS 67-63-0)	STEL	400 ppm

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2-Propanol (CAS 67-63-0)	TWA	200 ppm
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
2-Amino Ethanol (CAS 141-43-5)	STEL	6 ppm
2-Amino Ethanol (CAS 141-43-5)	TWA	3 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Amino Ethanol (CAS 141-43-5)	STEL	15 mg/m ³ , 6 ppm
2-Amino Ethanol (CAS 141-43-5)	TWA	8 mg/m ³ , 3 ppm
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m ³ , 5 ppm
2-Propanol (CAS 67-63-0)	IDLH	2000 ppm
2-Propanol (CAS 67-63-0)	STEL	1225 mg/m ³ , 500 ppm
2-Propanol (CAS 67-63-0)	TWA	980 mg/m ³ , 400 ppm

US. ACGIH. BEIs. Biological Exposure Indices

Components	Value	Determinate	Specimen	Sampling Time
2-Propanol (CAS 67-63-0)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*
2-Propanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US. Minnesota Hazardous Substances List (Minn. Rules 5206.0400).

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Skin designation applies.

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.100)

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US. OSHA Table Z-1-A (29 CFR 1910.100)

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US. Tennessee. OELs Occupational Exposure Limkits, Table Z1A

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Wear protective gloves.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 - Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Dark opaque, thin liquid.
Color	Dark Blue.

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Odor	Alcohol.
Odor threshold	Not available.
pH	11.5
Melting point/freezing point	Not relevant.
Initial boiling point and boiling range	177 - 212°F (80.6 - 100°C)
Flash point	76°F (24.4°C) Tag Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.94 ± 0.01
Relative density temperature	75 °F (23.89 °C)
Solubilities	Completely soluble.
Partition Coefficient n-octanol/water	Not available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	<10 cSt
Viscosity Temperature	75 °F (23.89 °C)

Section 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 oxidizing agents. Isocyanates. Chlorine.
Hazardous Decomposition Products	No hazardous decomposition products are known.

Section 11 - Toxicological information

Information on likely routes of exposure

Ingestion	May be harmful if swallowed.
Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects.

Acute toxicity Narcotic effects.

Components	Level	Type	Code	Species	Results
2-Butoxyethanol (CAS 111-76-2)	Acute	Dermal	LD50	Rabbit	400 mg/kg
	Acute	Inhalation	LC50	Rat	450 mg/l, 4 hrs
	Acute	Oral	LD50	Rat	560 mg/kg
2-Amino Ethanol (CAS 141-43-5)	Acute	Dermal	LD50	Rabbit	1025 mg/kg
	Acute	Oral	LD50	Rat	1715 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/ eye irritation Causes serious eye irritation.

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 Evaluation of Carcinogenicity

Component	Result	Comment
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2-Butoxyethanol (CAS 111-76-2)

3

Not classifiable as to carcinogenicity to humans.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure May cause drowsiness and dizziness.
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. Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

Section 12 - Ecological Information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component(s)

2-Amino Ethanol, 141-43-5

Aquatic

Acute	Algae	EC50	Selenastrum capricornutum (new name Pseudokirchnerella subca	2.5 mg/l, 48 hours
	Crustacea	EC50	Daphnia magna	65 mg/l, 48 hours
	Fish	LC50	Goldfish (Carassius auratus)	170 mg/l, 96 hours
	Fish	LC50	Cyprinus carpio	349 mg/l, 96 hours

Persistence and degradability The product is expected to be biodegradable.

Bioaccumulative potential Not known.

Partition coefficient n-octanol / water log (Kow)

Components	Results
2-Butoxyethanol (CAS 111-76-2)	0.83
2-Propanol (CAS 67-63-0)	0.05
2-Amino Ethanol (CAS 141-43-5)	-1.31

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13 - Disposal considerations

Disposal instructions Dispose in accordance with applicable federal, state, and local regulations.

Local disposal regulations Dispose of in accordance with local regulations.

Hazardous waste code Waste codes should be assigned by the user based on the application for which the product was used.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport information

DOT

UN number UN1987
Proper shipping name ALCOHOLS, N.O.S. (2-PROPANOL)
Transport hazard class(es) 3
Subsidiary class(es) -
Packing group III
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Labels required 3
Special provisions B1, IB3, T4, TP1, TP29
Packaging exemption 150
Packaging non bulk 203
Packaging bulk 242

IATA

UN number UN1987
UN proper shipping name ALCOHOLS, N.O.S. (2-PROPANOL)
Transport hazard class(es) 3
Subsidiary class(es) -
Packaging group III
Environmental hazards No
ERG Code 3L

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Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other Information

IMDG

UN number UN1987
UN proper shipping name ALCOHOLS, N.O.S. (2-PROPANOL)
Transport hazard class(es) 3
Subsidiary class(es) -
Packaging group III
Environmental hazards No
Marine pollutant
Labels required 3
EmS F-E, S-D

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code This substance/mixture is not intended to be transported in bulk.

Section 15 - Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR707, Subpt. D) Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed

CERCLA Hazardous Substance List (40 CFR 302.4)

Components	Result
2-Butoxyethanol (CAS 111-76-2)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	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 chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS #	% by wt.
2-Butoxyethanol	111-76-2	10 - 15

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HSPs) List Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US.Massachusetts RTK - Substance List

Components
 2-Propanol (CAS 67-63-0)
 2-Butoxyethanol (CAS 111-76-2)
 2-Amino Ethanol (CAS 141-43-5)

US.New Jersey Worker and Community Right-to-Know Act

Components
 2-Propanol (CAS 67-63-0)
 2-Butoxyethanol (CAS 111-76-2)
 2-Amino Ethanol (CAS 141-43-5)

US.Pennsylvania RTK - Hazardous Substances

Components
 2-Propanol (CAS 67-63-0)
 2-Butoxyethanol (CAS 111-76-2)
 2-Amino Ethanol (CAS 141-43-5)

US.Rhode Island RTK

Components
 2-Butoxyethanol (CAS 111-76-2)
 2-Amino Ethanol (CAS 141-43-5)

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)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

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Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances	Yes
Unites States Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

*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).

Section 16 - Other information, including date of preparation or last version

Issue date 7/16/2015

Version # 01

Disclaimer The information contained herein was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond the manufacturer's control, it is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense arising from the product's improper use. No warranty, expressed or implied, regarding the product described herein shall be created by or inferred from any statement or omission in this SDS. Various government agencies may have specific regulations concerning the transportation, handling, storage, use or disposal of this product which may not be reflected in this SDS. The user should review these regulations to ensure full compliance.