SAFETY DATA SHEET

1. Identification

Product Identifier	**Ammoniated Glass Cleaner**	
Other means of identification		
Product code	CU-1110, 25-BPNP	
Recommended use	Window and glass cleaner.	
Recommended restrictions	None.	
Manufacturer information		
Company name	Chemical Universe, Inc.	
Address	1841 Vernon St. North Kansas City, MO 64116	
Telephone	(816) 471-3602	
Fax	(816) 474-3302	
Emergency phone number	PERS	(800) 633-8253
	24-hour Emergency	(800) 633-8253

2. Hazard(s) Identification

Physical hazards	Not classified.	
Health hazards	Skin Irritant	Category 2
	Eye Irritant	Category 2A
Environmental hazards	Not classified.	
OSHA defined hazards	Not listed.	
Label elements		

Signal word	**WARNING**
Hazard statement	Causes skin irritation. Causes serious eye irritation.
Precautionary statement	
Prevention	Wash hands and exposed skin thoroughly after handling. Wear protective gloves. Wear eye protection/face protection.
Response	**IF ON SKIN**: Wash with plenty water. Specific treatment (see Section 4 on the Safety Data Sheet) If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing before reuse. **IF IN EYES**: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage	No prescriptive instruction
Disposal	No prescriptive instruction
Hazard(s) not otherwise classified (HNOC)	None.
Supplemental information	None.

3. Composition/information on ingredients

Mixture Component(s)		
Chemical name	**CAS number**	**%**
2-butoxyethanol	111-76-2	3-8
Aqua ammonia	1336-21-6	0.5-1.5
Other components below reportable levels		90-96

4. First-aid measures

Inhalation	Move to fresh air if irritated.
Skin contact	Rinse with water.
Eye contact	Rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Dermatitis. Rash. May cause an allergic skin reaction.
Indication of immediate medical attention and special treatment needed	Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.
Fire-fighting equipment/instructions	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	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. Wear eye/face protection.
Methods and materials for containment and cleaning up	Caution – spillages may be slippery. Large spills: Stop the flow of material if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements, or confined areas.

	Small spills: Wipe up with absorbent material (e.g., cloth, absorbent wipes). Clean surface thoroughly with water to remove residual contamination. Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into surface drainage paths and other areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling	Avoid contact with eye. Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Do not store in extreme temperature conditions. (<32°F or > 120°F)

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
2-butoxyethanol	PEL	50 ppm
Ammonium hydroxide	PEL	18 mg/m^3

US ACGIH Threshold Limit Values

Components	Type	Value
2-butoxyethanol	STEL	20 ppm
Ammonium hydroxide	TLV	18 mg/m^3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Species	Sampling Time
2-butoxyethanol	200 mg/g	Creatinine	Urine	End of shift.

Appropriate engineering controls	Emergency eye wash stations and showers should be readily accessible.

Individual protection measures, such as personal protective equipment

Eye/face protection	Avoid contact with eyes.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Latex and nitrile rubber are industry-accepted barrier materials
Other	None.
Respiratory protection	Respiratory protection not required for prescribed use of this product
Thermal hazards	None.
General hygiene considerations	When using do not smoke or use chewing tobacco. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

9. Physical and chemical properties

Appearance

Physical State	Liquid.
Color	Colorless
Odor	Ammoniacal mild

Odor threshold	Not available.
pH	11-12
Melting/freezing point	Not available.
Initial boiling point and boiling range	>212°F (100°C)
Flash point	>225°F (107°C)
Evaporation rate	Not available.
Flammability	Not available.
Flammability Limits	
Upper	Not available.
Lower	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity (water=1)	1.00
Solubility in water	100 % Soluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Not available.
Decomposition temperature	Decomposes on heating.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	This product is stable and non-reactive under normal conditions of use.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames can cause product to decompose.
Incompatible materials	None.
Hazardous decomposition products	Carbon dioxide, carbon monoxide, ammonia (gas).

11. Toxicological information

Information on likely routes of exposure	
Ingestion	Expected to be a low ingestion hazard.
Inhalation	Expected to be a low inhalation hazard.
Skin contact	Prolonged skin contacts cause irritation.
Eye contact	Repeated and/or prolonged eye contact causes serious eye irritation.
Symptoms related to the physical, chemical, and toxicological characteristics	Dermatitis. Rash. May cause an allergic skin reaction.
Acute toxicity	Not established.

Product	Ammoniated Glass Cleaner (CAS mixture)

Exposure Classification	Route and Species	LD_{50}/ LC_{50}
Acute	*Oral*, rat	>5,000 mg/kg estimated
Acute	*Inhalation,* rat	>1.340 mg/m^3
*Estimates for product may be based on additional component data not shown		

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/ irritation	Causes serious eye irritation.
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not considered a carcinogen.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not Listed.
Reproductive toxicity	Not classified.
Specific target organ toxicity – single exposure	Not classified.
Specific target organ toxicity – repeated exposure	Not classified.
Aspiration hazard	Not considered an aspiration hazard.

12. Ecological information

Ecotoxicity		
Product Ammoniated Glass Cleaner (CAS mixture)		
Aquatic Receptor	**Species**	**Test Threshold(s)**
Fish	Oncorhynchus mykiss	LC_{50} (96-hr): 199 mg/L (estimated)
Specific toxicity threshold cannot be derived as the potential effects are highly dependent upon the pH of the receiving water and its buffer capacity highly variable.		
*Estimates for product may be based on additional component data not shown		

Persistence and degradability	Not available. Chemicals of this class are not expected to be persistent in an open, aerobic environment
Bio-accumulative potential	Potential to bioaccumulate is low.
Mobility in soil	Not available. Chemicals of these classes are expected to exhibit moderate to high mobility in saturated and semi-saturated soils
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Dispose of in accordance with local regulations.
Local disposal regulations	None.
Waste from residues/unused product	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. As packaged, this product is not believed to meet criteria defining RCRA hazardous wastes when disposed. (40 CFR Part 261, Subpart C). Before selecting disposal method, ensure that the waste materials have been properly assessed and, as necessary, tested to confirm regulatory status. This material and its container must be disposed of in a safe manner. (See: Disposal instructions).
Contaminated packaging	Empty containers should be rinsed with water and recycled.

14. Transport information

DOT Not regulated as dangerous goods.

15. Regulatory information

US federal regulations .

SARA 302 Extremely hazardous substance Not listed.

SARA 304 Emergency release notification Not listed.

SARA 311/312 Hazard Categories

Immediate Hazard - Yes

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting)

2-butoxyethanol (Glycol Ether Category)
Aqua ammonia (CAS # 1336-21-6)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986
This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to threshold determination and Safe Harbor notification (1/2019)

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

Issue date 9/15/2016

Revision date 8/5/2019

Version # 2

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 0
Instability: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge and have been obtained from resources believed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified by the text.

Revision information	General format update; Refine composition table, amend physical data; Update toxicology thresholds and environmental fate information; Text clarification amendments Sections 5,6,8,9 and 12. PPE recommendation updated; California Proposition 65 notice; HMIS and NFPA pictograms added.