



Safety Data Sheet

G-147 Ammoniated Heavy Duty Glass Cleaner

SECTION 1. IDENTIFICATION

Product Identifier	G-147 Ammoniated Heavy Duty Glass Cleaner
Other Means of Identification	G-147
Product Family	Glass Cleaner
Recommended Use	Glass Cleaning.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	Griffin Bros. Inc., 3033 Industrial Way NE, Salem, Oregon, 97303, 800-456-4743
Supplier Identifier	Griffin Bros. Inc., 3033 Industrial Way NE, Salem, Oregon, 97303, 800-456-4743
Emergency Phone No.	CHEMTREC, 800-424-9300, Available 24 hours. CHEMTREC, 800-424-9300, Available 24 hours.
SDS No.	0114

SECTION 2. HAZARD IDENTIFICATION

Classified according to the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Inhalation) - Category 4; Skin corrosion - Category 1B; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3; Aquatic hazard (Acute) - Category 1

Label Elements



Danger

H302 + H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
P260	Do not breathe dusts or mists.
P280	Wear eye protection/face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
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Water	7732-18-5	80 to 85	
2-Propanol	67-63-0	10 to 20	
Dipropylene glycol monomethyl ether	34590-94-8	1 to 3	
Ammonium hydroxide	1336-21-6	1 to 3	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment). Move to fresh air. Remove source of exposure or move to fresh air.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Wash with plenty of water.

Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary.

Ingestion

Rinse mouth with water. Do not induce vomiting. Call a Poison Centre or doctor if you feel unwell.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

Affect of ammonia gas is primary risk.

Immediate Medical Attention and Special Treatment

Target Organs

Eyes, skin, respiratory system.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

Released ammonia gas may have impact.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water, fog, foam, carbon dioxide.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Ammonia gas may be released when solution is heated.

Special Protective Equipment and Precautions for Fire-fighters

Take precautions for release of ammonia gas in a fire.

No special equipment is required.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Take precautions for release of ammonia gas.

Environmental Precautions

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It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Knock down gas with fog or fine water spray.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid release to the environment.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL		AIHA® WEEL®	
	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
2-Propanol	200 ppm	400 ppm	400 ppm			
Dipropylene glycol monomethyl ether	100 ppm	150 ppm	100 ppm			
Ammonium hydroxide	25 ppm	35 ppm	50 ppm			

Appropriate Engineering Controls

The hazard potential of this product is relatively low. General ventilation is usually adequate.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Chemical safety goggles should be used.

Respiratory Protection

If engineering controls and work practices are not effective in controlling inhalation exposure then wear suitable personal protective equipment including approved respiratory protection.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Light blue liquid. Particle Size: Not applicable
Odour	Ammonia-like (Ammonium hydroxide)
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not applicable (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	~ 0.95 at 25 °C
Solubility	Soluble in water; Not available (in other liquids)

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Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid
Molecular Formula	Not available
Molecular Weight	Not available
Bulk Density	Not available
Surface Tension	Not available
Critical Temperature	Not available
Electrical Conductivity	Not available
Vapour Pressure at 50 deg C	Not available
Saturated Vapour Concentration	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Will react strongly to acid.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Can release ammonia gas if heated and can react strongly with acid.

Conditions to Avoid

High temperatures.

Incompatible Materials

Ammonium hydroxide can react strongly to contact with acids.

Hazardous Decomposition Products

Ammonium hydroxide can react with galvanized surfaces, copper, brass, bronze, aluminum alloys, mercury, gold, and silver. Ammonia gas can be released if liquid is heated.

SECTION 11. TOXICOLOGICAL INFORMATION

A small amount of Ammonium Hydroxide is present in this cleaner and is the dominant source of health and safety concerns for this product.

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
2-Propanol	~ 17,000 ppm (rat) (4-hour exposure)	~ 4,720 mg/kg (male rat)	~ 12,890 mg/kg (rabbit)
Ammonium hydroxide	~ 5131 mg/m ³ (rat) (1-hour exposure) (vapour)	~ 350 mg/kg (rat)	

LC50: No information was located.

LD50 (oral): No information was located.

LD50 (dermal): No information was located.

Skin Corrosion/Irritation

May cause very mild irritation based on information for closely related chemicals.

Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May be harmful based on information for closely related materials.

Skin Absorption

May be harmful based on information for closely related materials.

Ingestion

Harmful based on information for closely related materials.

Aspiration Hazard

May cause lung damage if aspirated based on physical properties (e.g. kinematic viscosity) and chemical family (hydrocarbon).

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

Ammonia gas can cause severe respiratory damage.

Carcinogenicity

Not known to cause cancer.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

Not known to cause effects on or via lactation.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

Not known to have interactive effects.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life.

Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

Other Adverse Effects

None known.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	1719	Caustic alkali liquids, n.o.s. (Ammonium hydroxide)	8	III

Environmental Hazards Marine Pollutant (Ammonium hydroxide)

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By Michael Harvey

Phone No. 800-456-4743

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Date of Last Revision December 06, 2016

Revision Indicators The following SDS content was changed on December 06, 2016:
Section 8 - Exposure Controls/Personal Protection; Exposure Guidelines.
The following SDS content was changed on December 06, 2016:
Section 11 - Toxicological Information; LC50/LD50 values.

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