1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer
Titan Laboratories
2935 Irving Blvd.
#209
Dallas, TX 75247

Contact: Titan Laboratories
Phone: 800-475-3300 // 214-638-1200
Email: info@titanlabs.net
Web: www.titanlabs.net

Product Name: Glass Gleam-4
Revision Date: 1/11/2015
Version: 4.00
SDS Number: 123
Common Name: Cleaner
CAS Number: MIXTURE
Chemical Family: Cleaner
Chemical Formula: *** PROPRIETARY ***
Product Use: Glass cleaning
Emergency Phone: +1-800-255-3924

2 HAZARDS IDENTIFICATION

NFPA:
HMIS III:

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS III</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE HAZARD</td>
<td>HEALTH</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>FLAMMABILITY</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>SPECIFIC HAZARD</td>
<td>PHYSICAL HAZARDS</td>
</tr>
<tr>
<td></td>
<td>0</td>
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</tbody>
</table>

Health = 1, Fire = 1, Reactivity = 0
H*1/F1/PH0

PERSONAL PROTECTION INDEX

A | G
B | H
C | I
D | J
E | K
F | X

Consult your supervisor or S.O.P. for "SPECIAL" handling instructions

B | Safety Glasses, Gloves
GHS Signal Word:
DANGER

GHS Hazard Pictograms:

GHS Classifications:
- Health; Acute toxicity, 4 Oral
- Health; Skin corrosion/irritation, 2
- Health; Serious Eye Damage/Eye Irritation, 1

GHS Phrases:
- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H318 - Causes serious eye damage

GHS Precautionary Statements:
- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P262 - Do not get in eyes, on skin, or on clothing.
- P264 - Wash skin thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P273 - Avoid release to the environment.
- P281 - Use personal protective equipment as required.
- P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with
  water/shower.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present
  and easy to do. Continue rinsing.
- P321 - Specific treatment (see supplementary first aid instructions on this label).
- P332+313 - If skin irritation occurs: Get medical advice/attention.
- P337+313 - If eye irritation persists: Get medical advice/attention.
- P362 - Take off contaminated clothing and wash before reuse.
- P405 - Store locked up.
- P410+412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
- P501 - Dispose of contents/container to an approved waste disposal plant.

Health Hazards: Not to be expected if handled and used properly. Health hazard assignment applies to concentrated
product only. When this product is used at the dilutions recommended by Titan Laboratories, it attributes minimal to no
health hazards, acute or chronic, to the end user.
3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Cas #</th>
<th>Percentage</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>80-89%</td>
<td>Proprietary, non-hazardous, non-regulated</td>
</tr>
<tr>
<td>68439-46-3</td>
<td>10-15%</td>
<td>Alcohols, C9-11, ethoxylated</td>
</tr>
<tr>
<td>68130-47-2</td>
<td>1-5%</td>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono-C8-10-alkyl ethers, phosphates</td>
</tr>
</tbody>
</table>

4 FIRST AID MEASURES

Inhalation: Give oxygen or artificial respiration if needed. If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.

Skin Contact: Take off contaminated clothing and shoes immediately. Promptly flush skin with water for at least 15 minutes to ensure all chemical is removed. If reddening develops and/or persists, obtain medical attention.

Eye Contact: Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Remove contact lenses if present and easy to do so. If eye irritation persists, obtain medical attention.

Ingestion: Rinse mouth with water. Do NOT induce vomiting unless instructed to do so. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see Section 2) and/or Section 11.

Indication of any immediate medical attention and special treatment needed: No data available.

5 FIRE FIGHTING MEASURES

| Flammability: | No data available |
| Flash Point:  | DNA               |
| Flash Point Method: | DNA |
| Burning Rate: | No data available |
| Autoignition Temp: | No data available |
| LEL:          | DNA               |
| UEL:          | DNA               |

Extinguishing Media:
- Water Spray
- Water Fog
- Carbon Dioxide
- Alcohol-Resistant Foam
- Dry Chemical

Special Hazards Arising From the Substance or Mixture:
- Aldehydes Carbon
- Oxides Hydrocarbon
- particulate Hydrogen
- Chloride gas
Nitrogen Oxides (NOx)
Phosphorous Oxides
Sodium Oxides
Sulfur Oxides

Advice for Firefighters:
Firefighters should wear full-face, positive-pressure respirators.

Further Information:
If incinerated, may release toxic fumes.
Use water spray to cool unopened containers.
Do NOT use high volume water jet to extinguish fire, as the force of the water jet may cause fire to spread.
See Section 7 for more information on safe handling.
See Section 8 for more information on personal protection equipment.
See Section 13 for disposal information.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Use personal protective equipment.
Keep from contacting skin or eyes.
Avoid breathing vapors, mist or gas.
Ensure adequate ventilation.
Evacuate personnel to safe areas.

Environmental Precautions:
Prevent further release (leakage/spillage) if safe to do so.
Do not allow product to enter drains.
Do not allow to drain to environment.

Methods and Materials for Containments and Cleaning Up:
Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust).
Place contaminated material into suitable, closed containers for disposal.
Dispose of contaminated material according to Section 13.
After spillage has been collected, area may be flushed with water or wet-brushed.
Ensure adequate ventilation.

Reference to Other Sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for information on proper disposal.

7 HANDLING AND STORAGE

Handling Precautions:
Avoid breathing vapors or mist.
Avoid contact with eyes, skin, or clothing.
Keep containers closed when not in use.
Do not expose containers to open flame, excessive heat, or direct sunlight.
Keep away from sources of ignition.
Do not smoke while using material.
Do not puncture or drop containers.
Handle with care and avoid spillage on the floor (slippage).
Storage Requirements:
- Keep material out of reach of children.
- Keep material away from incompatible materials.
- Wash thoroughly after handling.
- Keep container tightly closed.
- Store in a well-ventilated place.
- Do not store at temperatures exceeding 50 °C/122 °F.
- Do not store in direct sunlight.
- Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents, Alcohols, Amines, reactive metals (Zinc & Aluminum) and their alloys (Brass, etc.), Copper and its alloys, Iron, rubber, and materials that are reactive with Hydroxyl compounds.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

Personal Protective Equipment:
- Eye/face protection: When using material use safety glasses and gloves according to HMIS PP, B. All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
- Skin protection: Handle with gloves made from PVC, Neoprene or Nitrile. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Dispose of contaminated gloves according to applicable laws and laboratory practices.
- Body Protection: Chemically resistant gloves, and safety glasses are recommended. Type of protective equipment should be selected based on concentration amount and conditions of use of this material.
- Respiratory protection: Full-face vapor respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds.
- Control of environmental exposure: Prevent leakage or spillage if safe to do so. Do not let material enter drains.

Components with workplace control parameters:
Contains no substances with occupational exposure limit values.

Biological occupational exposure limits:
Contains no substances with biological occupational exposure limits values.
PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, blue liquid

**Physical State:** Liquid

**Odor Threshold:** Not determined

**Particle Size:** Not determined

**Spec Grav./Density:** 1.028 g/ml (8.58 lbs/gal)

**Viscosity:** Not determined

**Sat. Vap. Conc.:** Not determined

**Boiling Point:** 100.6 °C (213 °F)

**Flammability:** (solid, gas): Not determined

**Partition Coefficient:** Not determined

**Vapor Pressure:** (mm Hg @ 25 °C): 20

**pH:** @ 1%: 7.4

**Evap. Rate:** (N-Butyl Acetate = 1): Not determined

**Molecular weight:** MIXTURE

**Decomp Temp:** Not determined

**Odor:** Pleasant

**Molecular Formula:** MIXTURE

**Solubility:** 100%

**Softening Point:** Not determined

**Percent Volatile:** 1.02%

**Heat Value:** Not determined

**Freezing/Melting Pt.:** Not determined

**Flash Point:** DNA

**Octanol:** Not determined

**Vapor Density:** (air = 1): Not determined

**VOC:** 10.3 g/l

**Bulk Density:** Not determined

**Auto-Ignition Temp:** Not determined

**UFL/LFL:** Not determined

STABILITY AND REACTIVITY

**Stability:** Product is stable under normal conditions.

**Conditions to Avoid:** Incompatibilities, flames, ignition sources.

**Materials to Avoid:** Strong acids, strong bases, strong oxidizing agents, strong reducing agents, Alcohols, Amines, reactive metals (Zinc & Aluminum) and their alloys (Brass, etc.), Copper and its alloys, Iron, rubber, and materials that are reactive with Hydroxyl compounds.

**Hazardous Decomposition:** Aldehydes, Carbon Oxides, Hydrocarbon particulate, Hydrogen Chloride gas, Nitrogen Oxides (NOx), Phosphorous Oxides, Sodium Oxides and Sulfur Oxides.

**Hazardous Polymerization:** Will not occur.

TOXICOLOGICAL INFORMATION

**Component(s):** Alcohols, C9-11, ethoxylated; Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono-C8-10-alkyl ethers, phosphates

**CAS No(s):** 68439-46-3; 68130-47-2

**Acute Toxicity:**

LD50 Oral - Rat: 3,950 mg/kg
LD50 Dermal - Rabbit: >5,000 mg/kg

**Skin Corrosion/Irritation:** Rabbit skin - Corrosive (4 h).

**Serious Eye Damage/Eye Irritation:** Rabbit eyes - Severe eye irritation.

**Respiratory or Skin Sensitization:** No data available.

**Germ Cell Mutagenicity:** No data available.

**Carcinogenicity:**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive Toxicity:** No data available.

**Specific Target Organ Toxicity - Single Exposure:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure:** No data available.

**Aspiration Hazard:** No data available.

**Additional Information:**
Component: Alcohols, C9-11, ethoxylated; RTECS: AX8100000
Component: Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono-C8-10-alkyl ethers, phosphates; RTECS: 1001516AS

## ECOLOGICAL INFORMATION

### Component(s):
Alcohols, C9-11, ethoxylated; Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono-C8-10-alkyl ethers, phosphates

### CAS No(s):
68439-46-3; 68130-47-2

### Toxicity:

**Toxicity to fish:**
LC50 - Oncorhynchus mykiss (Rainbow Trout): 5.5 mg/l (96 h)
LC50 - Pimephales promelas (Fathead Minnow): 8.5 mg/l (144 h)

**Toxicity to daphnia and other aquatic invertebrates:**
EC50 - Daphnia magna (Water Flea): 5.3 mg/l (48 h)

### Persistence and Degradability:
Readily biodegradable.

### Bioaccumulative potential:
No data available.

### Mobility in Soil:
No data available.

### Results of PBT and vPvB assessment:
Not required/conducted.

### Other Adverse Effects:
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.
13 DISPOSAL CONSIDERATIONS

Product: Hazardous wastes shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging: Dispose of as unused product.

14 TRANSPORT INFORMATION

DOT (US)
Non-regulated material, liquid

IMDG
Non-regulated material, liquid

IATA
Non-regulated material, liquid

15 REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

*Alcohols, C9-11, ethoxylated (68439463 10-15%) SARA311/312, TSCA

*Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono-C8-10-alkyl ethers, phosphates (68130472 1-5%) TSCA

REGULATORY KEY DESCRIPTIONS

SARA311/312 = SARA 311/312 Toxic Chemicals
TSCA = Toxic Substances Control Act

16 OTHER INFORMATION

Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material in any process. The information set forth herein is furnished free of charge and is based on technical data that Titan Laboratories believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside of Titan Laboratories' control, Titan Laboratories makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe upon, any patents.

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