MAINTENANCE SOLUTIONS, INC.
SAFETY DATA SHEET

1. Identification

Product identifier: MAINTENANCE SOLUTIONS KRYSTAL KLEAR GLASS, PLASTIC & CRT CLEANER (0-1220)
Recommended use: Cleaner
Recommended restrictions: None known.
Manufacturer / supplier: Maintenance Solutions, Inc.
7755 E. Gelding Dr., #103
Scottsdale, AZ 85260 United States
Phone: 800-747-9593 **Emergency telephone US:** 800-255-3924 (CHEMTEL) MIS007542

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas
Health hazards Not classified.

Label elements
Signal word Warning
Hazard statement Contains gas under pressure; may explode if heated.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Protect from sunlight. Store in a well-ventilated place.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC): None known.

3. Composition/information on ingredients

Chemical characterization: Mixture of water, solvents and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

2 - 10% 2-Butoxyethanol	CAS 111-76-2
2 - 10% Ethyl Alcohol	CAS 64-17-5
1 - 3% Butane	CAS 106-97-8
1 - 3% Propane	CAS 74-98-6

4. First-aid measures

Inhalation Move to fresh air. Get medical attention if symptoms persist.
Skin contact: Get medical attention if irritation develops and persists.
Eye contact: Rinse with water. Get medical attention if irritation develops and persists.
Ingestion: Rinse mouth.
Most important symptoms/effects, acute and delayed: Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically.
General information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. 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: Contents under pressure. Gases hazardous to health may be formed in fire.
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: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
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: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. 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. See Section 8 of the SDS for Personal Protective Equipment. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up: Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3 (50 ppm)
Ethyl Alcohol (CAS 64-17-5)	PEL	1900 mg/m3 (1000 ppm)
Propane (CAS 74-98-6)	PEL	1800 mg/m3 (1000 ppm)

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethyl Alcohol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3 (5 ppm)
Butane (CAS 106-97-8)	TWA	1900 mg/m3 (800 ppm)
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m3 (1000 ppm)
Propane (CAS 74-98-6)	TWA	1800 mg/m3 (1000 ppm)

Exposure guidelines

US - California OELs: Skin designation: 2-Butoxyethanol Can be absorbed through skin.

US - Minnesota Haz Subs: Skin designation applies: 2-Butoxyethanol Skin designation applies.

US - Tennesse OELs: Skin designation: 2-Butoxyethanol Can be absorbed through skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation: 2-Butoxyethanol Can be absorbed through skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000): 2-Butoxyethanol Can be absorbed through skin.

Appropriate engineering controls: Good general ventilation 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.

Individual protection measures, such as personal protective equipment

Eye/face protection: If contact is likely, safety glasses with side shields are recommended.

Hand protection: For prolonged or repeated skin contact use suitable protective gloves.

Other: Wear suitable protective clothing.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
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.

9. Physical and chemical properties

Appearance: Clear.
Physical state: Gas.
Form: Aerosol. Liquefied gas.
Color: Colorless. Pale yellow
Odor: Butyl
Odor threshold: Not available.
pH: 9.5 - 10.5 estimated
Flash point: -156.0 °F (-104.4 °C) Propellant estimated
Melting point/freezing point: Not available.
Initial boiling point and boiling range: 212 °F (100 °C) estimated
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
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: 80 - 100 psig @70F estimated
Vapor density: Not available.
Relative density: Not available.
Solubility (water): Not available.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Specific gravity: 0.97 estimated
Deflagration density: > 2.52 g/cm3 Tested
Aerosol spray ignition distance: < 15 cm Tested estimated

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. **Incompatible materials:** Strong oxidizing agents.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid: Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure:
Ingestion: Expected to be a low ingestion hazard.
Inhalation: Prolonged inhalation may be harmful.
Skin contact: No adverse effects due to skin contact are expected. 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: Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics:
Direct contact with eyes may cause temporary irritation.
Information on toxicological effects:
Acute toxicity Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.
Respiratory sensitization: Not a respiratory sensitizer. **Skin sensitization:** 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:
2-Butoxyethanol 3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.
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. Not likely, due to the form of the product.
Chronic effects: Prolonged inhalation may be harmful. May be harmful if absorbed through skin. 2-Butoxy ethanol may be absorbed through skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity: Harmful to aquatic life.
Persistence and degradability: No data is available on the degradability of this product.
Bioaccumulative potential: No data available.
Partition coefficient n-octanol / water (log Kow)
2-Butoxyethanol 0.83 Butane 2.89 Ethyl Alcohol -0.31 Propane 2.36
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 material.

13. Disposal considerations

Disposal instructions: Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations. Empty containers may retain some product residues. This material and its container must be disposed of in a safe manner. Empty containers should be taken to an approved waste site for recycling or disposal. Emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT: **UN number:** UN1950 **UN proper shipping name:** Aerosols **Class:** 2.2 **Packing group:** N/A
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions: Product meets the exception requirements of section 173.306 and may be shipped as a limited quantity.

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 CFR 707, Subpt. D): Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.
SARA 304 Emergency release notification: Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories Immediate Hazard – No Delayed Hazard – No Fire Hazard - No
Pressure Hazard – Yes Reactivity Hazard - No
SARA 302 Extremely hazardous substance: Not listed.
SARA 311/312 Hazardous chemical: No
SARA 313 (TRI reporting): 2-Butoxyethanol

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Butane, Propane
Safe Drinking Water Act (SDWA): Not regulated.

US state regulations

US. Massachusetts RTK - Substance List **US. Rhode Island RTK**
US. New Jersey Worker and Community Right-to-Know Act
US. Pennsylvania Worker and Community Right-to-Know Law
2-Butoxyethanol, Butane, Ethyl Alcohol, Propane
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.

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

Issue date 01-05-2015 **Revision date** N/A

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 relates 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 in the text.