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Material Safety Data Sheet

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_____ 1 Chemical Product and Company Identification _____ Tradename: 3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Twist 'n Fill(TM) System) Product ID: 70-0715-9204-5 XN-1015-7814-6 70-0715-9208-6 61-0000-6322-4 61-0000-6363-8 70-0716-8343-0 70-0716-8344-8 Intended Use of Product: Hard Surface Cleaner Division: ND - Building & Commercial Services Division _____ 2 Hazards Identification _____ Critical Hazards: Combustible liquid and vapour. Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision. Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 2 of 10 Twist 'n Fill(TM) System) -----

See Sections 7 and 11 for further information.

_____ 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Percentage
WATER	7732-18-5	60 - 90
D-GLUCOPYRANOSE, OLIGOMERIC, DECYL	68515-73-1	5 - 10
OCTYL GLYCOSIDES		
ISOPROPYL ALCOHOL	67-63-0	3 - 7
D-GLUCOPYRANOSE, OLIGOMERIC, C10-16-	110615-47-9	1 - 5
ALKYL GLYCOSIDES		
SODIUM LAURYL SULFATE	151-21-3	0.5 - 1.5
POTASSIUM CARBONATE	584-08-7	0.5 - 1.5
NOTE:		

Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

This product meets Green Seal[™] Standard GS-37 based on effective performance, concentrated volume, minimized/recycled packaging, and protective limits on: VOCs and human & environmental toxicity. Skin/eye damage met requirements at the as-used dilution, as specified for closed dilution systems. GreenSeal.org.

4 First Aid Measures

_____ Instructions for Eye Contact: Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention. Instructions for Skin Contact: Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention. Instructions for Inhalation: Remove person to fresh air. If you feel unwell, get medical attention. Instructions for Ingestion:

Rinse mouth. If you feel unwell, get medical attention.

3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 3 of 10 Twist 'n Fill(TM) System) _____ 5 Fire Fighting Measures _____ 48.9 C CC Does not sustain Flash point: combustion (ASTM D-4206)

Lower Explosive Limit (%): Not Available Upper Explosive Limit (%): Not Available Autoignition temperature: No data available. Suitable Extinguishing Media: In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide. Exposure Hazards during Fire: No data available. Combustion Products from Fire: Carbon monoxide - During Combustion; Carbon dioxide - During Combustion; Unusual Fire and Explosion Hazards Combustible liquid and vapour. Closed containers exposed to heat from fire may build pressure and explode. Fire Fighting Procedures: No unusual fire or explosion hazards are anticipated. Evacuate area. NFPA: Health 2 NFPA: Fire 2 NFPA: Reactivity 0 NFPA: Unusual Reaction Hazard none National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities. _____ 6 Accidental Release Measures _____ Personal Precautions: Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Environmental Procedures 3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 4 of 10 Twist 'n Fill(TM) System) For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Methods for cleaning up Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears

dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible. Spill Response: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. _____ 7 Handling and Storage Storage Requirements: Store in a well-ventilated place. Keep cool. Incompatible Materials: Store away from acids; Store away from oxidizing agents. Ventilation: Do not use in a confined area or areas with little or no air movement. Fire Prevention: Grounding or safety shoes with electrostatic dissipating soles (ESD) are not required with TWIST 'n FILL(TM). Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Explosion Prevention: Take precautionary measures against static discharge. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use Instructions: For industrial or professional use only. This product is not intended to be used without prior dilution as specified on the product label. Keep out of reach of children. 3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 5 of 10 Twist 'n Fill(TM) System) _____ Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Avoid release to the environment. Keep container tightly closed. Special Instructions: Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer. 8 Exposure Controls/Personal Protection _____

Personal Protection

Eve Protection: NOTE: When used with a chemical dispensing system as directed, eye contact with the concentrate is not expected to occur. If the product is not used with a chemical dispensing system or if there is an accidental release, wear protective eye/face protection. The following should be worn alone or in combination, as appropriate, to prevent eye contact: Indirect vented goggles; Hand Protection: The following glove material(s) are recommended: nitrile rubber; polyethylene/ethylene vinyl alcohol; Skin Protection: NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, skin contact with the concentrate is not expected to occur. If the product is not used with the Twist 'n Fill system or if there is an accidental release, Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Respiratory Protection: NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, respiratory protection is not required. Select one of the following approved respirators based on airborne concentration of contaminants and in accordance with regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters Ingestion (Prevention): Do not eat, drink or smoke when using this product. Recommended Ventilation: NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, special ventilation is not required. 3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 6 of 10 Twist 'n Fill(TM) System) _____ Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Ingredient Exposure Data WATER (7732-18-5) > 90 ml/kg No data available. LD50 (rat, oral) LC50 (rat, inhalation/4 hours) Exposure Limits No data available. D-GLUCOPYRANOSE, OLIGOMERIC, DECYL OCTYL GLYCOSIDES (68515-73-1) Specific Ingredient Data No data available. No data available. LD50 (rat, oral)

LC50 (rat, inhalation/4 hours) No data available. Exposure Limits No data available. ISOPROPYL ALCOHOL (67-63-0) LD50 (rat, oral) 5045 mg/kg 12800 mg/kg LD50 (dermal, rabbit) LC50 (rat, inhalation/4 hours) 17000 ppm Exposure Limits ACGIH: TWA 200 ppm ACGIH: STEL 400 ppm D-GLUCOPYRANOSE, OLIGOMERIC, C10-16-ALKYL GLYCOSIDES (110615 - 47 - 9)Specific Ingredient Data No data available. LD50 (rat, oral) No data available. LC50 (rat, inhalation/4 hours) No data available. Exposure Limits No data available. SODIUM LAURYL SULFATE (151-21-3) 1288 mg/kg LD50 (rat, oral) No data available. LC50 (rat, inhalation/4 hours) Exposure Limits No data available. POTASSIUM CARBONATE (584-08-7) LD50 (rat, oral) 1870 mg/kg LC50 (rat, inhalation/4 hours) No data available. Exposure Limits No data available.

3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 7 of 10 Twist 'n Fill(TM) System) _____ _____ 9 Physical and Chemical Properties _____ Physical form,Color,Odour: Liquid; Clear; dark blue colour; apple fragrance; No data available. Odour Threshold: pH: 11.5 148.9 C Boiling point/boiling range: Melting point/melting range: No data available. Vapour pressure: Not Available Water Solubility: Complete Partition coefficient (K o/w): Not Available. Specific gravity: Approximately 0.92 g/ml Water=1 Vapour density: No data available. Volatile organic compounds: 60 - 100 % CARB Evaporation rate: No data available. < 50 centipoise Viscosity: Percent Volatile: 70 - 100 % _____ 10 Stability and Reactivity Conditions to Avoid:

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None known.
Materials to Avoid:
  Strong oxidizing agents;
  Store away from acids;
Hazardous Decomposition:
  Carbon monoxide - During Combustion;
  Carbon dioxide - During Combustion;
Stability and Reactivity:
  Stable. Hazardous polymerization will not occur. This material is
  considered to be non reactive under normal use conditions.
_____
11 Toxicological Information
_____
Effects from Eye Contact:
  Severe Eye Irritation: Signs/symptoms may include significant
  redness, swelling, pain, tearing, cloudy appearance of the cornea,
  and impaired vision.
Effects from Skin Contact:
  Mild Skin Irritation: Signs/symptoms may include localized redness,
  swelling, itching, and dryness.
Effects from Inhalation:
  Respiratory Tract Irritation: Signs/symptoms may include cough,
  sneezing, nasal discharge, headache, hoarseness, and nose and
  throat pain.
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_____
Effects from Ingestion:
  Gastrointestinal Irritation: Signs/symptoms may include abdominal
  pain, stomach upset, nausea, vomiting and diarrhea.
Sensitization Information:
  No data available.
Carcinogenicity:
  No data available.
Mutagenicity:
  No data available.
Reproductive Effects:
  No data available.
Component Based Information:
  No data available.
Product Based Information:
  No data available.
_____
12 Ecological Information
_____
Environmental Data:
Ecotoxicity Data:
  Not determined.
Ecofate Data:
  Not determined.
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13 Disposal Considerations _____ Product as Sold: Since regulations vary, consult applicable regulations or authorities before disposal. **Product Packaging:** No data available. Special Instructions: Since regulations vary, consult applicable regulations or authorities before disposal. _____ 14 Transport Information Transportation of Dangerous Goods -----TDG Classification: Non-Regulated Material Special Information: 3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Page 9 of 10 Twist 'n Fill(TM) System) _____ 15 Regulatory Information -----WHMIS Classification: B3, D2B NOTE: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR. Product Certifications: The product on this MSDS, or all its components, is included on the following countries' chemical inventories, as noted: AICS - Australian Inventory of Chemical Substances DSL - Domestic Substances List (Canada) TSCA - Toxic Substances Control Act (USA) EINECS - European Inventory of Existing Commercial Chemical Substances PICCS - Philippines Inventory of Commercial Chemical Substances 16 Other Information -----Reason for Reissue: The following Sections and topics have been updated or revised: Section 3 - Composition/Information on Ingredients Section 4 - First Aid Measures Section 5 - Fire Fighting Measures Section 6 - Accidental Release Measures Section 7 - Handling and Storage Section 10 - Stability and Reactivity; Section 11 - Toxicological Information;

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