



MATERIAL SAFETY DATA SHEET
Formula 710 Multi-Surface Acid Cleaner

TENNANT
 701 North Lilac Drive
 P.O. Box 1452
 Minneapolis, MN 55440-1452

EMERGENCY PHONE NUMBERS:

CHEMTREC: (800) 424-9300 (24 hrs)
 CANADA: CANUTEC (613) 996-6666 (24 hrs)

District of Columbia: (202) 483-7616 (24 hrs)
 MSDS Requests: (800) 553-8033

PREPARATION INFO:

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This Material Safety Data Sheet (MSDS) has been prepared in compliance with the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.

Issue Date: September 8, 2003	HAZARD RATING	NFPA	HMS	NFPA	HMS	4 = Extreme	3 = High	0 = Insignificant
Supersedes: May 2, 2003	Health	3	2	Reactivity	0	2 = Moderate	1 = Slight	COR = Corrosive
Printed: 6/10/04	Fire	1	1	Special	COR			X = Ask supervisor for guidance.

***** I. IDENTIFICATION *****

PRODUCT NAME: Formula 710 Multi-Surface Acid Cleaner

US DEPT OF TRANSPORTATION (GROUND):

PART NUMBER: 612023, 612226

UN#: UN1760

PACKAGING GROUP: II

CHEMICAL FAMILY: Acid Cleaner

HAZARD CLASSIFICATION: Corrosive

MATERIAL USE: Restroom Cleaner for Floors

SHIPPING NAME: Corrosive Liquid, N.O.S.
 (contains Phosphoric and Sulfamic Acid)

***** II. PHYSICAL DATA *****

BOILING POINT:	212°F / 100°C	FREEZE POINT:	0°F. / -18°C.
DENSITY:	1.1 kg/L	% VOLATILE:	69 by wt
SOLUBILITY IN WATER:	Complete	VAPOR PRESSURE:	Not Available mm Hg at 20 °C.
ODOR THRESHOLD:	Not Available	pH:	1.7 @ 10%
PHYSICAL FORM:	Liquid	VAPOR DENSITY:	Not Available THAN AIR
APPEARANCE AND ODOR:	Pink/Wintergreen	COEFFICIENT WATER/OIL DISTRIBUTION:	Not Available
EVAPORATION RATE:	Slower THAN N-BUTYL ACETATE	VOC g/L (lb/gal):	402 (3.35)
MECHANICAL IMPACT:	Not Available	STATIC DISCHARGE:	Not Available

***** III. INGREDIENTS *****

All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory. Hazardous ingredients, defined as Controlled Products by Canadian WHMIS, are identified by (HZD) after the chemical ingredient. This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all of the information required by the CPR.

<u>CHEMICAL</u>	<u>CAS #</u>	<u>% W</u>	<u>OSHA PEL ppm</u>	<u>ACGIH TLV TWA ppm</u>	<u>ACGIH TLV STEL ppm</u>	<u>LD50</u>	<u>LC50 INHALATION</u>
Nonionic Surfactant	9016-45-9	5-10	Not Available	Not Available	Not Available	3000 mg/kg (oral rat) >3 g/kg (skin rabbit)	Not Available
Nonionic Surfactant	68987-81-5	5-10	Not Available	Not Available	Not Available	Not Available	Not Available
Citric Acid (HZD)	77-92-9	5-10	Not Available	Not Available	Not Available	Not Available	Not Available
Dipropylene Glycol Monomethyl Ether (HZD)	34590-94-8	10-20	100	100	150	5135 mg/kg (rat)	Not Available
Phosphoric Acid (HZD)	7664-38-2	1-5	N.Av.	0.25	0.75	Not Available	Not Available
Sulfamic Acid (HZD)	5329-14-6	1-5	Not Available	Not Available	Not Available	Not Available	Not Available

SARA Title III Section 313 Information:

Components present in this product at a level which could require reporting under this statute are:

Phosphoric Acid - CAS #7664-38-2 <5% by wt.

California Proposition 65 Information:

This product contains the following chemicals that have been designated as cancer and/or reproductive hazards under California Proposition 65.

Trace amounts of Ethylene Oxide - CAS #75-21-8, Propylene Oxide - CAS #75-56-9 and 1,4 Dioxane - CAS #123-91-1

**** IV. FIRE AND EXPLOSIVE HAZARD DATA ****

FLAMMABLE: No **FLASH POINT:** 170°F / 76°C Setaflash
FLAMMABLE LIMITS: % LEL: Not Available % UEL: Not Available **AUTOIGNITION TEMPERATURE** Not Available / Not Available
EXTINGUISHING MEDIA: Use National Fire Protection Association (N.F.P.A.) Class B extinguishers (carbon dioxide, dry chemical or foam).
SPECIAL FIRE FIGHTING PROCEDURES:
Water may be ineffective, but may be used to cool closed containers to prevent pressure buildup or possible auto ignition when exposed to extreme heat (fog nozzles preferred). Wear self-contained breathing apparatus.
UNUSUAL FIRE EXPLOSION HAZARD:
Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. Do not apply to hot surfaces.

**** V. REACTIVITY DATA ****

STABILITY: Stable **HAZARDOUS POLYMERIZATION (May Occur/Will Not Occur):** Will Not
CONDITIONS TO AVOID: Not Available
INCOMPATIBILITY (materials to avoid): Strong alkali.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide and oxides of phosphorous, nitrogen, sulfur, ammonia or amines.

**** VI. HEALTH HAZARD DATA ****

EFFECTS OF OVEREXPOSURE: **THRESHOLD LIMIT VALUE - See Section III for individual ingredients.**
PRIMARY ROUTES OF ENTRY: Inhalation & Skin Contact
SKIN CONTACT/ABSORPTION: Skin contact may cause severe irritation. Prolonged or repeated skin contact may cause burns.
EYE CONTACT: Extremely irritating with possible permanent eye injury. During application of this product, contact lenses should NOT be worn.
INGESTION (Swallowing):
Contains materials which will cause a burning sensation, gastric upset, diarrhea and severe inflammation to mucous membranes.
INHALATION (Breathing):
Slight headache. May burn nasal passages.
SUPPLEMENTAL HEALTH INFORMATION:
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

**** VII. EMERGENCY AND FIRST AID PROCEDURES ****

SKIN CONTACT: Wash immediately with mild soap and water. Rinse thoroughly with cool water.
EYE CONTACT: Flush immediately with water for 15 minutes; CALL A PHYSICIAN.
INGESTION (Swallowing): CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. DO NOT attempt to induce vomiting, give two glasses of water.
INHALATION (Breathing): Remove to fresh air.

**** VIII. PREVENTIVE MEASURES ****

SPILL OR LEAK PROCEDURES: **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**
Absorb with inert material (sand, vermiculite, etc.). Sweep or scoop up and put in disposal container. Flush area with water; prevent washings from entering waterways.
WASTE DISPOSAL METHOD: Dispose of in accordance with federal, state and local regulations.
SPECIAL PROTECTION INFORMATION: RESPIRATORY PROTECTION and VENTILATION:
Unless air monitoring demonstrates vapor/mist levels above applicable limits, no respirator is required. If respirator is required, the appropriate, properly fitted respirator (NIOSH/MSHA approved) should be worn during application. Follow respirator manufacturers directions for respirator use.
Local exhaust.
PROTECTIVE GLOVES (specify type): **EYE PROTECTION (specify type)**
Impervious gloves; i.e., rubber, nitrile Chemical splash goggles
SKIN PROTECTION: Impervious gloves, chemical splash goggles, and protective clothing.
SPECIAL PRECAUTIONS: PRECAUTIONS TO BE TAKEN IN HANDLING OR STORAGE:
Store inside in a cool (below 100°F or 37.5°C), dry place.
OTHER PRECAUTIONS: Do not take internally. Avoid prolonged contact with skin; contaminated clothing should be removed immediately. Avoid free fall of liquid in excess of a few inches.