SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Company Address:
8125 Cobb Center Drive
Kennesaw, GA 30152

Product Information: 800-TECH-401
Customer Service: 800-645-5244
Emergency: (Chemtrec) 800-424-9300
Revision Date: October 1, 2000

Product Identification

FLUX-OFF® AQUEOUS (Liquid)

Product Code: ES132, ES132C

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. % Range
Deionized water	7732-18-5	50.0-75.0
Dipropylene glycol methyl ether	34590-94-8	10.0-20.0
Propylene glycol butyl ether	5131-66-8/15821-83-7	5.0-10.0
Ethoxylated nonyl phenol	68412-54-4	1.0-5.0
Sodium Metasilicate	6834-92-0	1.0-5.0

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: Clear, colorless liquid with mild solvent odor. Liquid will irritate eyes and skin under repeated or prolonged exposure. Breathing high concentrations of product vapor may produce central nervous system depression. This product is not flammable.

Potential Health Effects:

Eyes: DO NOT get in eyes. This product is irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation.

Skin: Contact causes skin irritation.

Ingestion: DO NOT take internally. Harmful if swallowed. Irritating to mouth, throat and stomach. May cause vomiting.

Inhalation: Excessive inhalation of vapors can cause nasal and respiratory irritation and central nervous system effects including dizziness, weakness, fatigue, nausea, headache and unconsciousness.

Pre-Existing Medical Conditions Aggravated by Exposure: Heart, lung, skin, eye.

SECTION 4: FIRST AID MEASURES

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel if irritation develops or persists.

Skin: Wash skin with soap and water immediately. Remove contaminated clothing. Get medical attention if irritation develops or persist. Wash clothing separately before reuse.

Ingestion: Swallowing less than an ounce will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get immediate medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: >200°F
LEL/UEL: Not established (% by volume in air)

Extinguishing Media: Use water fog, carbon dioxide, or dry chemical when fighting fires involving this material.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Large Spills: Shut off leak if possible and safe to do so. Wear self-contained breathing apparatus and appropriate personal protective equipment. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.

Small Spills: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal.

SECTION 7: HANDLING AND STORAGE

Avoid prolonged or repeated contact with eyes, skin, and clothing. Wash hands thoroughly after handling or contact. Use with adequate ventilation. Avoid breathing product vapor or mist. Do not reuse this container. Store in a cool dry place away from heat, sparks and flame. Keep container closed when not in use. Do not store in direct sunlight.

KEEP OUT OF REACH OF CHILDREN.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Guidelines:

CHEMICAL NAME	ACGIH TLV	OSHA PEL	ACGIH STEL
Dipropylene glycol methyl ether	100 ppm	100 ppm	150 ppm
Propylene glycol butyl ether	NA	NA	NA
Ethoxylated nonyl phenol	NA	NA	NA

Work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Wear safety glasses with side shields (or goggles) and rubber or other chemically resistant gloves when handling this material.

NFPA and HMIS Codes:	NFPA	HMIS
Health	1	1
Flammability	0	0
Reactivity	0	0
Personal Protection	-	B

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear, pale yellow liquid
Odor: Mild solvent
pH: 12.0-14.0
Vapor Pressure: 14 mm Hg @ 25C
Vapor Density: >1
(Air =1)
Solubility in Water: Completely
Specific Gravity: (Water =1) 1.03
Evaporation Rate: >1 (Butyl acetate=1)
Melting Point: NA
Percent Volatile: 93
Boiling Point: 212F @760 mm Hg (initial)

SECTION 10: STABILITY AND REACTIVITY

Stability - This product is stable. Conditions to Avoid: Do not spray near open flames, red hot surfaces or other sources of ignition.
Incompatibility: Do not mix with aluminum, galvanized iron and zinc, powdered alkali and alkaline earth metals or strong oxidizing agents.
Products of Decomposition: Thermal decomposition may release carbon monoxide, carbon dioxide and incompletely burned hydrocarbons.
Hazardous Polymerization: Will not occur
Conditions to Avoid: NA

SECTION 11: TOXICOLOGICAL INFORMATION

Ingestion:

Sodium Metasilicate	LD50/rats	1153 mg/kg
Dipropylene glycol methyl ether	LD50/rat	5135 mg/kg
Propylene glycol butyl ether	LD50/rat	3300 mg/kg

Skin:

Dipropylene glycol methyl ether	LD50/rats	9,500 mg/kg
Sodium Metasilicate	Human	250 mg/24H SEV
Propylene glycol butyl ether	LD50/Rabbit	3100 mg/kg

Eye:

Dipropylene glycol methyl ether	human	8 mg MLD

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC
Reproductive effects: none Teratogenic effects: none Mutagenic effects: none

SECTION 12: ECOLOGICAL INFORMATION

Environmental Impact Information

Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

REPORTING

US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is:
1-800-424-8802

Environmental Impact Data
(percent by weight)

CFC	0.0%	VOC	25.0.%
HCFC	0.0%	HFC	0.0%
Cl. Solv.	0.0%	ODP	0.00

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

SECTION 14: TRANSPORTATION INFORMATION

Air and Ground:: Proper Shipping Name Cleaning Compound Not Regulated

SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).
None
This information should be included on all MSDSs copied and distributed for this material.
TOXIC SUBSTANCES CONTROL ACT (TSCA).
All ingredients of this product are listed on the TSCA Inventory.
WHMIS: Class D2B
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16: OTHER INFORMATION Note: This MSDS is applicable to date codes of 1015 or later.

Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.
REFERENCES: 29 CFR 1910.1200 40 CFR 300-700 ANSI Z400.1-1998
NIOSH RTECS provided by CHEM-BANK by SILVERPLATTER
Guide to Occupational Exposure Values 1997

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.