

**Material Safety Data Sheet**  
Surrender EF

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**DATE PREPARED:** 8/21/2013  
**REVISION DATE:** 11/14/2013  
**CHEM-TEL:** 800-225-3924  
**PRODUCT NUMBER:** 5460

**SECTION I - IDENTIFICATION**

**PRODUCT NAME:** Surrender EF  
**PRODUCT CODE:** 5460  
**PRODUCT USE:** Anti-Seize compound/coating

**SECTION II – COMPOSITION/HAZARDOUS INGREDIENTS**

HAZARDOUS INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV
Hydrotreated Heavy Naphthenic Petroleum Distillate	64742-52-5	Not Established	Not Established
Propane/n-Butane	68476-86-8	1000 ppm	1000 ppm
Heptane	142-82-5	500 ppm	400 ppm
Aluminum	7429-90-5	5 mg/m3	1 mg/m3
Graphite	7782-42-5	2 mg/m3	Pending

**SECTION III – HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** Danger: Extremely Flammable Aerosol; Harmful if Inhaled.  
**ROUTES OF ENTRY:** Eyes, Ingestion, Inhalation, Skin  
**EYES:** Causes irritation, burning, redness, tearing.  
**INGESTION:** Ingestion of product may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis  
**INHALATION:** Irritation to respiratory tract, dizziness, headache, nausea, depression of central nervous system, prolonged exposure may cause unconsciousness, heart effects, liver effects, kidney effects, and death.  
**SKIN:** Causes localized defatting, irritation, may be absorbed through skin with systemic effects.  
**MEDICAL CONDITION AGGRAVATED:** Excessive exposure will aggravate pre-existing skin disorders, respiratory, liver, kidney, cardiovascular or pulmonary illnesses.  
**CARCINOGENICITY:**  
OSHA: No ACGIH: No NTP: No IARC: No OTHER: No

**SECTION IV - FIRST AID MEASURES**

**EYES:** Remove contact lenses. Flush with water for at least 15 minutes. Get immediate medical attention  
**INGESTION:** Rinse mouth with water. Do not induce vomiting unless directed by medical authority. Seek medical attention if irritation persists.  
**INHALATION:** Move to fresh air. If breathing is difficult, administer oxygen. If not breathing administer artificial respiration or at any sign of loss of consciousness seek immediate medical attention.  
**SKIN:** Immediately wash with soap and water for 15 minutes. Remove contaminated clothing and shoes immediately. Seek medical attention if irritation develops.  
**NOTE TO PHYSICIAN:** If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

**SECTION V – FIRE-FIGHTING MEASURES**

**FLASH POINT:** Not Tested  
**FLAMMABLE LIMITS IN AIR, (% BY VOLUME)** UPPER: Not tested LOWER: Not tested  
**EXTINGUISHING MEDIA:** Dry chemical, foam, or Carbon Dioxide (CO<sub>2</sub>).  
**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH approved Self Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires.

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**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Contents under pressure. Exposure to temperatures above 120 F may cause bursting.

Contains a flammable propellant. Keep away from heat, sparks, open flames and other sources of ignition.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of carbon

## SECTION VI – ACCIDENTAL RELEASE MEASURES

**SPILL:** Contain spill and eliminate ignition sources and ventilate area. Prevent spill from entering sewers, storm drains, and natural waterways. use non-combustible material like vermiculite, sand or earth for larger spills.

**WASTE DISPOSAL:** Dispose of in accordance with federal, state, and local regulations. Do not dump in sewers. Wrap container and place in trash collection, do not puncture, incinerate, or reuse container.

**RCRA STATUS:** Waste likely considered hazardous under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

## SECTION VII – HANDLING AND STORAGE

**HANDLING AND STORAGE:** Lock up and store in a cool, dry area. Keep containers tightly closed. Follow label directions.

## SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS / VENTILATION:** Local ventilation/exhaust may be needed in confined spaces

**PROTECTIVE CLOTHING:** Safety glasses and chemical resistant gloves are recommended.

**ADDITIONAL MEASURES:** Wash hands immediately after use. Do not get on clothes or skin.

## SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Thick silver liquid

**ODOR:** Aliphatic solvent odor

**PHYSICAL STATE:** Liquid

**BOILING POINT:** Unknown

**FREEZING POINT:** Not Tested

**VAPOR PRESSURE (mm Hg):** Not Tested

**VAPOR DENSITY (AIR=1):** > 1 @ 77°F (25°C)

**EVAPORATION RATE:** >7

**SPECIFIC GRAVITY (H2O=1):** 0.930@ 77° F (25°C)

**pH:** N/A

**SOLIDS (%):** 70%

**SOLUBILITY IN WATER:** Immiscible

**VOLATILITY INCLUDING WATER (%):** 87%

**VOLATILE ORGANIC COMPOUNDS (VOC):** 40%

## SECTION X – STABILITY AND REACTIVITY DATA

**CONDITIONS TO AVOID:** Temperatures greater than 120°F and sources of ignition.

## SECTION XI – TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL INFORMATION:** Heptane (142-82-5) LD<sub>50</sub> (Oral, Rat) 15,000 mg/kg; LC<sub>50</sub> (Inhalation, Rat, 4hr) 103 g/m<sup>3</sup>; LD<sub>50</sub> (Dermal, Rabbit) 2,000 mg/kg

## SECTION XII – ECOLOGICAL INFORMATION

**ECOLOGICAL INFORMATION:** Not Available

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**SECTION XIII – DISPOSAL CONSIDERATIONS**

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**SECTION XIV - TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:** ORM-D

**UN/NA NUMBER:** UN 1950

**AIR SHIPMENT**

**PROPER SHIPPING NAME:** Aerosols, Flammable

**SHIPPING BY WATER:**

**VESSEL (IMO/IMDG)**

**PROPER SHIPPING NAME:** Aerosols, Flammable

**SECTION XV - REGULATORY INFORMATION**

**TSCA STATUS:** All Chemicals are listed or exempt.

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):** None

**SARA 311/312 HAZARD CATEGORIES:** Acute Health Fire Hazard

**SARA 313 REPORTABLE INGREDIENTS:** Methylene Chloride - 75-09-2

**NFPA HEALTH:** 1

**NFPA FLAMMABILITY:** 3

**NFPA REACTIVITY:** 1

**NFPA OTHER:** None

**HMIS HEALTH:** 1

**HMIS FLAMMABILITY:** 3

**HMIS REACTIVITY:** 1

**HMIS PROTECTION:** G

**SECTION XVI - ADDITIONAL INFORMATION**

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