



## MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication  
And WHIMS Standard 29 CFR 1910-1200

Print Date: 04/01/2010

<b>Product Name:</b> CF-20, COIL FLUSH CLEANER	<b>Product Number:</b> 90-500, 90-501, 90-502
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### I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer:** ComStar International Inc. **Tel:** 718-445-7900, 800-328-0142  
**Address:** 20-45 128<sup>th</sup> Street, College Point, NY 11356 **Fax:** 718-353-5998  
**Supplier:** Aftermarket Specialties, Inc. 980 Cobb Place Blvd. NW Ste. 100  
Kennesaw, GA 30144-6801, U.S.A. **Tel:** 678-819-2274 **Fax:** 678-819-2275  
**Chemical Name:** Blended Formula  
**Synonym(s):** None

### II - INGREDIENTS/IDENTITY INFORMATION

<u>HAZARDOUS COMPONENTS</u> (Specific Chemical Identity)	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>CAS NO.</u>
(U.S. Patent No. 5,643.860) Blended Formula containing components from the glycol ether group and to a much lesser degree from the ketone and alcohol groups.	N/A	N/A	None

### III - HAZARDS IDENTIFICATION

NFPA Hazard Ratings: Health – 2, Flammability – 2, Chemical Reactivity - 0  
HMIS Hazard Ratings: Fire – 1, Health – 2, Reactivity – 0, Specific – 0

**NOTE:** NFPA and HMIS ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

### IV - FIRST-AID MEASURES

**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms persist.  
**Eyes:** Immediately flush with plenty of water for at least 15 minutes. Get medical attention.  
**Skin:** Remove contaminated clothing, wash affected skin with soap and water immediately. Get medical attention if symptoms occur.  
**Ingestion:** Drink plenty of water. Get immediate medical attention.

### V - FIRE FIGHTING MEASURES

**Flash Point (° F):** 182 ° F **Flammability Limit:** LET UEL  
**Extinguishing Media:** Water spray, dry chemical, carbon dioxide (CO<sub>2</sub>), Alcohol Foam  
**Special Fire Fighting Procedures:** Wear self-contained respiratory protection should be provided for firemen fighting in buildings or confined areas.

**Hazardous Combustion Products:** Carbon dioxide, carbon monoxide

**Unusual Fire and Exposure Hazards:** Forms peroxides of unknown stability. Vapors may travel along the ground. Eliminate sources of ignition.

## VI - ACCIDENTAL RELEASE MEASURES

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

**For Large Spills:** Flush spill area with water spray. Prevent run-off from entering drains, sewers, or streams, collect run-off.

## VII - HANDLING AND STORAGE

**Personal Precautionary Measures:** Avoid contact with eyes and skin. Wash thoroughly after handling. Do not breathe vapors or fumes.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials, alkalis and acids. Store away from heat, sunlight and moisture.

## VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits:**

**ACGIH Threshold Limit Value (TLV):** see section II

**OSHA (USA) Permissible Exposure Limit (PEL):** see section II

**Ventilation:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations to an acceptable level, a NIOSH approved respirator must be worn.

**Respirator Type:** Organic vapor. If respirators are used, a program should be instituted to assure Compliance with OSHA Standard 29 CFR 1910.134.

**Eye Protection:** Wear safety glasses with side shields (or goggles) and a face shield.

**Skin Protection:** It is a good industrial hygiene practice to minimize skin contact.

**Recommended Decontamination Facilities:** eye bath, washing facilities

## IX - PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point (° F):** 193 ° C / 380 ° F

**Vapor Pressure @ 70 ° F:** .501

**Vapor Density (Air = 1):** 5.09

**Solubility in Water:** Complete

**pH:** 6.0

**Appearance & Odor:** Slight odor and colorless liquid

**Specific Gravity (H<sub>2</sub>O = 1) :** .936

**Melting Point:** N/A

**Evaporation Rate:**

**(Butyl Acetate = 1):** .838

**Odor Threshold:** not available

**Volatile Fraction by Weight:** 100%

**Viscosity at 25° C (77° F):** 4.74 mPa.s or cP

**Octanol/ Water Partition Coefficient:** not available

**Auto ignition Temperature (ASTM D 2155):** 170 ° C / 350 ° F

## X - STABILITY AND REACTIVITY

**Stability:** Product is considered stable.

**Incompatibility:** strong oxidizing agents alkalis and acids

**Hazardous Polymerization:** not known to polymerize.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** Low hazard for usual industrial handling by trained personnel.

**Eyes:** Causes irritation and possible chemical burns.

**Skin:** Low hazard for usual industrial handling by trained personnel, see label warnings.

**Ingestion:** Dangerous if ingested.

**Acute Toxicity Data:**

**Oral LD-50 (rat):** 7292 mg/kg

**Oral LD-50 (mouse):** 2406 mg/kg

**Inhalation LC-50:** not available

**Dermal LD-50 (rabbit):** 2764 mg/kg

**Skin irritation (guinea pig):** slight

**Eye irritation (rabbit):** moderate

**Definitions for the following section(s):** LOEL = lowest – observed-effect level

NOAEL = no observed-adverse-effect level

NOEL = no-observed-effect level

**Subchronic Toxicity Data:**

**Inhalation study (5 – week, rat):** NOEL = 18 ppm (highest concentration obtainable)

**Oral study (6 – week, rat):** (target organ effects: red blood cell); LOEL = 1782 mg/kg/day;  
NOAEL = 891 mg/kg/day

**Dermal study (13 – week, rat):** NOEL = 2 mL/kg/day (highest dose tested)

**Dermal neurotoxicity study (13 – week, rat):** NOEL = 2 mL/kg/day (highest dose tested)

**Dermal study (rabbit):** NOEL for maternal toxicity = 1000 mg/kg/day (highest dose tested)  
NOEL for developmental toxicity = 1000 mg/kg/day (highest dose tested)

**Oral study (rat):** LOEL for maternal toxicity = 25 mg/kg NOEL for maternal toxicity = not established;  
NOEL for developmental toxicity = 633 mg/kg/day (highest dose tested)

**Reproductive Toxicity Data:**

**Dermal study (13 – week, rat):** NOEL for maternal/paternal toxicity = 2 mL/kg/day (highest dose tested). NOEL for maternal/paternal fertility = 2 mL/kg/day (highest dose tested)

NOEL for developmental toxicity = 2 mL/kg/day (highest dose tested)

**Oral study (rat):** NOEL for maternal/paternal fertility = 1000 mg/kg/day (highest dose tested)

NOAEL for embryo/fetotoxicity = 1000 mg/kg/day

**The above data may vary due to Batch Blending**

## XII - ECOLOGICAL INFORMATION

**Introduction:** Leaks should be stopped. Spills should be contained and cleaned up immediately. Large liquid spills should be removed by using a vacuum truck. Solid spills should be scooped up and placed in approved containers for disposal. The spill area should then be flushed with water followed by liberal covering of sodium bicarbonate. All clean-up material should be removed and placed in approved containers, labeled and stored in a safe place to await proper treatment or disposal. Spills on areas other than pavement, e.g., dirt or sand, may be handled by removing the affected soils and placing in approved containers. Persons performing clean-up work should wear adequate personal protective equipment and clothing. Spills or releases should be reported, if required, to the appropriate local, state and federal regulatory agencies.

## XIII - DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Check with state and local officials before disposal.

## XIV - TRANSPORT INFORMATION

**DOT (USA) Status:** not regulated

**TDG (Canada) Status:** not regulated

**Air – International Civil Aviation Organization (ICAO)**

**ICAO Status:** not regulated  
**Sea – International Maritime Dangerous Goods (IMDG)**  
**IMDG Status:** not regulated

## XV - REGULATORY INFORMATION

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 910.1200.

OSHA hazardous chemical(s): trade secret (blended formula).

Massachusetts Substance List: none.  
New Jersey Workplace Hazardous Substance List: none  
Pennsylvania Hazardous Substance List: none

This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.

**WHMIS (Canada) Ingredient Disclosure List:** trade secret (blended formula).

**WHMIS (Canada) Status:** not listed.

**WHMIS (Canada) controlled material(s):** not listed.

**WHMIS (Canada) Hazard Classification:** not classified.

**International Agency for Research on Cancer (IARC):** Not listed  
**American Conference of Governmental Industrial Hygienist (ACGIH):** Not listed  
**National Toxicology Program (NTP):** not listed  
**Occupational Safety and Health Administration (OSHA):** Not listed

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: None.

SARA (U.S.A.) Sections 311 and 312 hazard classification(s): Not listed.

**NOTE:** *The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Material Safety Data Sheet. Since the use of this information and of these opinions, and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.*