

EMS SynClean HD

HIGH-DETERGENCY, HIGH-FOAMING INDUSTRIAL CLEANER AND DEGREASER

- **Non-Butyl**
- **Non-Solvent**
- **Lifts Grease**
- **Cuts Animal Fats**
- **Cuts Vegetable Fats**
- **Non-Emulsifying**
- **USDA and FDA Approved**
- **Kosher Approved**
- **Reduces Grease Trap Maintenance**
- **Produces Thick Foam**
- **Non-Corrosive**

SynClean HD (High Detergency) is unlike any industrial degreaser on the market. Its superior degreasing power comes from a patented ingredient that safely lifts grease from any surface without the use of solvents. As such, it easily removes petroleum-based oils and vegetable and animal fats, along with dirt, soils and grime.

Other degreasers are solvent- or butyl-based cleaners. They work by emulsifying the grease from the top of the stain down to the surface where it lies. SynClean encapsulates each hydrocarbon molecule, effectively lifting it from the surface. This also means that we do not break down the hydrocarbons to where they absorb water, picking up weight, sinking them to the bottom of a grease trap or containment unit. The grease we pull away remains in a form to be easily removed.

SynClean also contains detergents, wetting agents, sequestering agents, penetrates, rust and corrosion inhibitors making it a true all-in-one cleaner for any use. And a little goes a long way! At a 10-1 dilution, SynClean easily removes caked-on hydraulic fluids or grease. Use at 30:1 for carpets, vehicles, floors, etc. It works great with warm or cold water and is safe in steam cleaners and rotary machines. SynClean HD offers our strongest cleaner and delivers ample foam. Ask your dealer about SynClean LF (Low Foam) for other applications.

SynClean will safely clean anything. While it has the power to remove asphalt from heavy machinery, it will do the same on your truck, car, RV or equipment with no danger to your finish.

It is Kosher approved and carries USDA Auth. Codes of A1, A2, A4, A8, and C1, making it ideal for the food processing industry.



Technical Data

NITRATE LEVEL: **0% - None**
FORM: **Liquid**
ODOR: **Mild Soapy Odor**
COLD STABILITY: **-18° F**
DETERGENCY: **Strong**
TOXICITY: **Non Toxic**
WETTING ABILITY: **Excellent**
STORAGE STABILITY: **3 Years+**

SHIPPER REGULATIONS: **None**
FLASH POINT: **None**
BOILING POINT: **212° F**
SOLUBILITY IN WATER: **100%**
BIODEGRADABLE: **Yes/100%**
VOLATILE BY VOLUME: **N/A**
CARCINOGENS: **None**
VISCOSITY: **Thin**

Common Uses

SynClean HD is a super concentrated industrial cleaner which at different dilutions can be used in almost countless environments.

Cleaning Uses

Drilling Rigs
Asphalt Removal
Oil Cleanup
Grease Removal
Heavy Equipment
Rental Yards
Restaurant Degreasing
Carbon Removal
Truck or Auto Washing
Carpets
Shop Floors
Protein Stains
Parts Cleaner/Degreaser
Wheel Cleaning

Metal Studies

Dept. of Transportation (D.O.T.) Test Protocols as per Section 173.154 Exceptions for Class 8 (corrosive materials): The material being tested must be proven to be non-destructive or not to cause irreversible alterations in human skin tissue. Testing was conducted on an albino rabbit.

Conclusion: SynClean HD proven to be NON-DESTRUCTIVE on human skin tissue.

Metal Test Limits: D.O.T. Classifies a material to be CORROSIVE if it has a corrosion rate that exceeds 6.25 mmpy on SAE C1020 carbon steel or 7075-Y6 Aluminum.

Results of SynClean HD: SAE 1020 carbon steel = 0.00 mmpy
7075-Y6 aluminum = 0.00 mmpy

Conclusion: SynClean HD is NON-CORROSIVE

Dilution Specifications

General cleaning:
Dilute 30:1

Degreasing:
Dilute 10:1

Heavy Degreasing:
Dilute 5:1

Apply to buildup, agitate, rinse. Repeat as needed.
For heavy buildup, let stand on stain for 1-2 minutes.

Toxicity Studies

Toxicity Limits: Test Procedure OECD 202, 48 hr.
LC 50 = .09 mg/l LD 50 = 107 mg/kg (rat oral)

Mutagenicity Limits: OECD Guidelines Sec. 471 Chemicals
SynClean HD was found NOT TO BE MUTAGENIC

Dermal Irritation & Corrosion Test

A modified Draize method was used as described in OECD Guidelines for the Testing of Chemicals Sec. 404 and complies with the requirements of OECD Principles of GLP, Annex revised as of July 1992.

SynClean HD received a Primary Irritation Score of .4 +/-0.1 and is classified as a "Non-Skin Irritant"

Biodegradation & Aquatic Safety

Test Procedure: Hach Reactor Digestion method for Waste Water and Sea Water. Hach Reactor Digestion Method is a semi-micro adaptation of the Standard Methods.

Test Results Conclude SynClean HD was found to be 100% Biodegradable

COD = **121 mg/L**

BOD = **No Detectable Limits**

Classifications & Approvals

D.O.T., TDG, IMO, IATA, IMDG, SARA 313 311/312, California Prop 65
NON-Regulated

FDA

Approved as Safe (GRAS)
(CGMP) CFR 184.1923

USDA Authorization

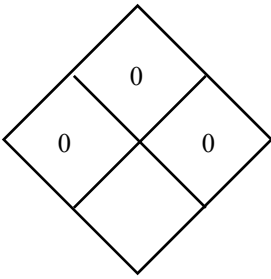
A1, A2, A3, A4, A7, A8, C2,

Mil Spec

Mil-C-25769-H
Mil-C-87936-A

Kosher Approved

Additional Studies & Results: When tested, SynClean HD showed no potential for the generation of Carbon Dioxide under NIOSH 7903, OSHA & ACGIH testing protocols governing workplace environments.



Material Safety Data Sheet

This MSDS complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200 and OSHA FORM 174. OMB No. 1218-0072

Identity (Trade Name As Used On Label)

SECTION 1 - COMPANY/PRODUCT INFORMATION

Manufacturer's Name: Environmental Manufacturing Solutions, L.L.C.

Address: 7705 Progress Circle

Melbourne, Florida 32904

Phone Number (For Information): 321-837-0050

Emergency Phone Number: (Chemtrec) 800-424-9300

IDENTITY: SynClean HD

CAUSE FOR MSDS: 29CFR Regs

MSDS Number: N/A

Date Prepared: 01/14/05

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION 2 - HAZARD INGREDIENTS/IDENTITY INFORMATION

| COMPONENTS - Chemical Name & Component Names (Hazardous Components 1% or greater. Carcinogens 1% or greater) | OSHA PEL | ACGIH TLV | OTHER LIMIT RECOMMENDED |
|--|----------|-----------|-------------------------|
| NON-HAZARDOUS / NON-REGULATED / NON-NITRATE FORMULA | N/A | N/A | N/A |
| NONE AS PER 29CFR Part 1910.1200 | | | |
| See Section—Federal Register Vol. 48 No. 228 Nov. 25, 1983 Rules & Regulations | | | |
| | | | |

SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS

| | |
|-----------------------------------|---|
| Boiling Point 212° F | Specified Gravity (H2O = 1) 1.09 |
| Vapor Pressure (mm Hg.) N/A | Melting Point N/A |
| Vapor Density <.1 | Evaporation Rate (Butyl Acetate = 1) <1 |
| Solubility In Water 100% Complete | Appearance and Odor Yellow, Soapy Odor |

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

| | | |
|--|---------------------------------------|---------|
| Flash Point (Method Used) NONE Non-Flammable | Flammable Limits NONE | LEL N/A |
| Extinguisher Media NONE | Special Fire Fighting Procedures NONE | UEL N/A |
| Unusual Fire and Explosion NONE | | |

SECTION 5 - REACTIVITY DATA

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|---|
| STABILITY: Unstable No Stable Yes |
| CONDITIONS TO AVOID: None Known |
| Incompatibility (Materials to Avoid) None Known |
| Hazardous Decomposition or Byproducts None Known |
| HAZARDOUS POLYMERIZATION: May Occur No Will Not Occur Yes |
| CONDITIONS TO AVOID: None Known |

SECTION 6 - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: Inhalation? No Know Effects Skin? May Cause Dryness Ingestion? Severely Irritating

HEALTH HAZARDS (*Acute and Chronic*) Due to the rapid degreasing effect of this product, contact with skin may cause dryness and/or cracking.

If in eyes, moderate to severe irritation may occur. Flush with plenty of water. If ingested, may cause nausea, gastrointestinal irritation and diarrhea.

CARCINOGENICITY: NTP? No IARC No OSHA Regulated? No

SIGNS AND SYMPTOMS OF EXPOSURE: No Known Signs. SEE HEALTH HAZARDS

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing dry skin may be aggravated

EMERGENCY AND FIRST AID PROCEDURES: Skin: Wash with soap and water until slick feeling is gone. Ingestion: Do not induce vomiting, drink large amounts of water and 1 quart of a citrus juice or vinegar and contact a physician. Eyes: Flush with water for at least 15 minutes or until irritation subsides.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled Mop or wipe up spill with appropriate absorbent material. Neutralize large spills with water or acetic acid

Waste Disposal Method As with any material to be discarded, dispose of in accordance with Federal, State and Local regulations and laws

If possible, recycle used containers

Precautions to Be Taken in Handling and Storing As with any material, store in its original container and keep closed when not in use

Other Precautions None Known

SECTION 8 - Control Measures

Respiratory Protection (*Specify Type*) None required when used in accordance with manufacturers directions and dilutions

Ventilation Normal ventilation is generally adequate

Local Exhaust N/A

Special N/A

Other N/A

Mechanical(*General*) N/A

Protective Gloves Rubber

Eye Protection In splashing conditions, it is always a good measure of safety to wear goggles

Other Protective Clothing or Equipment None Known, yet it is always a good measure of safety to maintain an eyewash station and emergency shower site.

Work/Hygienic Practices None Known. Please use good common sense in any work environment