

# ENVIRO SOLUTION

Surface Remediation Cleaner

## FEATURES & BENEFITS

- Ground-breaking Microbe Technology remediates hydrocarbons into water and carbon dioxide.
- Easily applied with mops, auto floor scrubbers and degreasing equipment.
- Excellent rinse-ability, dries quickly and removes all oily, slick film leaving a non-slip surface.
- Safe to use on any water-safe surface, including metal, concrete, plastic and rubber.
- Disposable in waste sewer drains whether or not facilities are private or municipal pre-treatment plants.
- Renders flammable liquids, such as gasoline, diesel and jet fuel, non-flammable.
- Non-toxic, non-pathogenic and is completely harmless to human, plant, animal and marine life.
- Compatible with oil/water separators, skimming units, evaporators, polymers and more.

## BIOREMEDIATION TECHNOLOGY

Bioremediation is the application of biological microbes for the clean up of hazardous oil spills resulting in a safe, efficient and cost-effective solution. Bioremediation (Fig. 1) uses microbes, enzymes, oxygen and other nutrients to chemically transform oil into carbon dioxide and water. ENVIRO SOLUTION (Fig. 2) increases the surface area of the oil while the enzymes break down the contaminants into smaller molecules. The enzymes then attract the microbes (Fig. 3) and consume the oil leaving only water and carbon dioxide as by-products. Once the reaction is complete, the enzymes break free to attach to another hydrocarbon source in order to repeat the same reaction.

Fig. 1

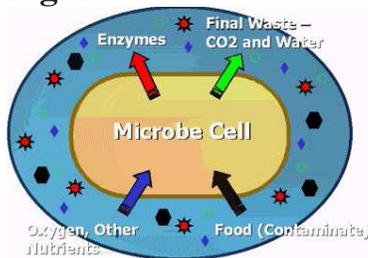


Fig. 2

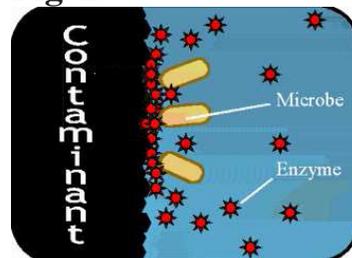
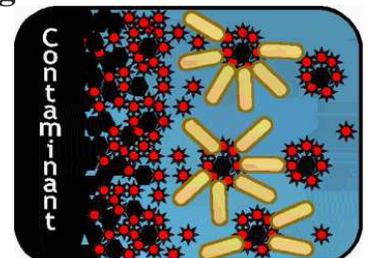


Fig. 3



## SAFETY SOLUTIONS

ENVIRO SOLUTION has a pH of 7 and does not have any odor or contain any corrosives or butyls. These microbes are naturally-occurring, not genetically engineered, and are non-toxic and non-pathogenic. It prevents slip and fall accidents, which are 30% of all workplace accidents, by removing the oily film and leaving surfaces dry and oil-free. ENVIRO SOLUTION significantly reduces the ability of flammable hydrocarbons to ignite. First, the VOC's are inerted on contact eliminating the potential of ignition. Second, it removes the fuel and slickness resulting in reduction of future accidents and surface degradation.

## FOOD PROCESSING SOLUTIONS

ENVIRO SOLUTION removes and degrades vegetable and animal oils and greases as well as proteins, starches and carbohydrates. This product is acceptable for use as a general cleaner (A1) on all surfaces in and around food processing areas, where its use is not intended for direct food contact. This product is also acceptable as a floor and wall cleaner (A4) in and around food processing areas, where its use is not intended for direct food contact. Use of this product in food processing or handling facilities requires that all food products and packaging materials be removed or protected prior to product use. A potable water rinse of cleaned surfaces is required after use of this product. When used according to manufacturer's instructions, the cleaner shall neither exhibit a noticeable odor nor leave a visible residue. Provides "deepcleaning" by penetrating the floor's surface and removing embedded oil/grease left in pores, cracks, grout and crevices by soap-based degreasers. Floor drains, normally clogged by soap-based cleaners, stay clean, free-running and odor-free.



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## USES & APPLICATIONS

**Mopping:** Fill the container with properly diluted product (1:10 to 1:15 depending on soil type and concentration). Unlike degreasers, ENVIRO SOLUTION digests oil and grease. As a result, there will not be an oily film in the water of the mop bucket. The solution may be used for several days until a film begins to appear. Although the water may look dirty, it does not mean the solution has stopped working. If the solution does not seem to be “picking up” the oil very well, then it is time to change the solution. For best results, with oily floors or visible oil, allow the solution to remain on the surface for about 30 seconds before mopping. Liberally apply to floor with a wet mop, dip mop again into bucket and agitate solution into surface. If the grease and/or oil is very thick, use an old push broom to scrub the solution into the surface before mopping. ENVIRO SOLUTIONS will remove the oily film and leave the surface dry and clean preventing slip-n- fall accidents.

**Auto Floor Scrubber:** Fill scrubber with properly diluted product (1:20 to 1:40 depending on soil type and concentration). Start with a 1:25 dilution rate and adjust after testing. Add product to the solution tank full of clean water or dispense through a proportioner system. For best results, employ the double-scrub method. For the first auto floor scrubber pass, do not lower the squeegee. Spray solution while scrubbing. For the second pass, spray solution, scrub and lower squeegee for soiled water removal. ENVIRO SOLUTION will clean the auto floor scrubber by removing the hydrocarbon build up in the tanks therefore enhancing the overall performance. Leaves surface dry and oil-free without any residue and prevents slip-n-fall accidents.

**Degreasing:** Fill container with properly diluted product (1:2 to 1:8 depending on soil type and concentration). The dilution rate may be determined if the operator will be using rags to clean (stronger), scrub brush (medium) or rinsing with a power washer (weaker). When cleaning heavy oil/grease deposits, allow product to soak for 1-2 minutes before removing. Heavy deposits of synthetic grease may require additional dwell time. ENVIRO SOLUTIONS will remove the oily film leaving the surface dry and clean. It may be used on any water-safe surface.

**Oil/Water Separators (OWS):** Can be costly to maintain and, if not properly managed, can pollute surface and ground water and lead to costly violations. ENVIRO SOLUTION improves OWS operations and reduces costs and liabilities. Conventional degreasers disperse oil in wash water and make OWS’s ineffective allowing oil to bypass the collection system straight to the sewer. ENVIRO SOLUTION added to an OWS breaks down petroleum products suspended or dissolved in the wastewater, floating oil, and/or sludge. Facilities using ENVIRO SOLUTION have eliminated wastewater violations and have reported reducing their sludge petroleum content by more than 80 percent. Such reductions lower the regulatory status of OWS sludge, which will affect the required disposal method and disposal costs.

### Hydrocarbon Degrade Chart

Crude Oil	Gasoline	Diesel Fuel	Xylene
Kerosene	Fuel Oils	Jet Fuel	Toluene
Transmission Fluid	Motor Oil	Anti-Freeze	Glycols
Paraffin	Lubricating Oil	Grease/Tars	Carbon Black
Skydrol	Hydraulic	Cutting Fluids	Benzene
Acetone	Mineral Spirits	Paint Thinners	Animal Grease
Methanol	Vegetable Oils	Heating Oil	Solvents

### Dilution Chart

Applications & Ratios	Heavy Duty	Medium Duty	Light Duty
Floor Scrubber	1:20	1:30	1:40
Mopping	1:5	1:10	1:15
Degreasing	1:2	1:4	1:8

## FUEL REMEDIATION AND CLEANING POWER

The figure shown on the left shows a 1000 gallon underground fuel storage tank containing jet fuel residue and flammable vapors. Before this tank could be dismantled with cutting torches, the remaining fuel needed to be neutralized and the tank thoroughly cleaned to remove any flammable vapors. Two gallons of Enviro Solution were applied and circulated throughout the tank. The picture on the right shows that the remaining jet fuel was remediated, rendering the fuel non-flammable and neutralizing any flammable vapors. The tank was rinsed with pressurized water, leaving a clean, residue-free and vapor-free environment.





## Surface Remediation Cleaner

# Product Information Sheet

### Features

- Neutral pH, non-corrosive, non-hazardous
- Disposable in waste sewer drains
- Removes stains and dries quickly and residue free
- Safe to use on any water-safe surface, including metal, concrete, plastic, and rubber
- Chemically transforms a variety of oils and oil byproducts into CO<sub>2</sub> and water
- Food Processing Acceptability: A1, A4



### Description

ENVIRO SOLUTION is a revolutionary technology that remediates hydrocarbons into water and carbon dioxide, eliminating 100% of disposal cost. Apply with mop, auto floor scrubber, spray-n-wipe, or parts washer to remove oil and slick residue, leaving a non-slip surface. Safe to use on any water-safe surface, including metal, concrete, plastic and rubber. Disposable in any wastewater drains, whether or not facilities are private or municipal pre-treatment plants. Compatible with oil/water separators, skimming units, evaporators, polymers and more.

### Applications

- Crude oil
- Fuel oil
- Gasoline
- Cutting fluids
- Hydraulic oil
- Jet fuel
- Solvents
- Diesel fuel
- Grease
- Motor oil
- Glycols
- Lubricating oil

### Directions

Dilution ratios (Ratio depends on soil type and concentration):

USE	HEAVY	MEDIUM	LIGHT
Scrubber	1:20	1:30	1:40
Mopping	1:5	1:10	1:15
Degreasing	1:2	1:4	1:8

**Mopping:** For best results, with oily floors or visible oil, allow the solution to remain on the surface for about 30 seconds before mopping. Liberally apply to floor with a wet mop and agitate solution into surface.

**Auto Floor Scrubber:** For best results, employ the double-scrub method. For the first pass, do not lower squeegee. Spray solution while scrubbing. For the second pass, spray solution, scrub, and lower squeegee for soiled water removal.

**Degreasing:** The dilution rate may be determined if the operator will be using rags to clean (stronger), scrub brush (medium), or rinsing with a power washer (weaker). When cleaning, heavy oil/grease deposits, allow product to soak for 1-2 minutes before removing. Ratio depends on soil type and concentration.

**Fuel Remediation:** Use 2 gallons per 1000 gallon tank, circulate throughout the tank to render the fuel non-flammable and neutralize any flammable vapors. Rinse tank with pressurized water, leaving a clean, residue-free and vapor-free environment.

**Golf Course De-Oiling:** Dilute 10:1 with water. Spray on infected area and let stand (1-2 hours), repeat 3 times then put on regular seeding and nutrient schedule.

### Product Characteristics

Appearance	Amber liquid
Odor	Bland
Boiling Point	212°F
Vapor Density	N/D
Volatile Content	0
Solubility in Water (25°C)	Soluble
Specific Gravity	1.0031
VOC (g/L)	0
pH	7
Melting Point	N/D
Evaporation Rate	N/D
Flash Point	> 300°F
Storage	Store at room temperature. Keep from freezing.
Transport information	
Class Code:	55
NMFC #:	48580-3
Proper Shipping Name	Compound Cleaning Liquid

**Product is activated by water. It will not work undiluted.**

Health	1
Flammability	0
Reactivity	0
Personal Protection	B



# Product Information Sheet

## Features

- Foaming formula is easy to apply and results in more contact time for better cleaning
- Neutral pH, no VOCs, non-flammable
- Disposable in waste sewer drains
- Removes stains and dries quickly and residue free
- Chemically transforms a variety of oils and oil byproducts into CO<sub>2</sub> and water
- Approved by U.S. EPA's "Design for the Environment" Program



## Description

ENVIRO SOLUTION AEROSOL is a revolutionary technology that remediates hydrocarbons into water and carbon dioxide, eliminating 100% of disposal cost. Spray on surfaces to remove oil and slick residue, leaving a non-slip surface. Safe to use on most water-safe surfaces, including metal, plastic, rubber, concrete, and painted surfaces.

## Applications

- |                   |                 |                   |
|-------------------|-----------------|-------------------|
| • Crude oil       | • Hydraulic oil | • Grease          |
| • Fuel oil        | • Jet fuel      | • Motor oil       |
| • Gasoline (BTEX) | • Brake fluid   | • Glycols         |
| • Cutting fluids  | • Diesel fuel   | • Lubricating oil |
| • Skydrol         | • Ethanol       | • Aviation fuels  |
| • Synthetic oils  | • Kerosene      |                   |

## Directions

Shake well before each use. Spray the product onto the surface to be cleaned. Allow a few seconds for the product to work. Using a clean, damp cloth, wipe the surface clean or rinse with water. When cleaning heavy oil and grease deposits, allow product to dwell for 1-2 minutes and use a brush to agitate before wiping or rinsing with water.

## Product Characteristics

Appearance	Amber
Odor	Bland
Form	Foam
Boiling Point	212°F
Vapor Density	N/D
Solubility	Soluble
Specific Gravity	1.0031
VOC (g/L)	0
pH	7
Evaporation Rate	N/D
Flash Point	Equal to water
Storage	Store in a cool, dry place (room temperature). Keep from freezing.
Transport information	
Class #	55
Proper Shipping Name	Consumer Commodity, ORM-d
NMFC	48580-3

Health	1
Flammability	0
Reactivity	0
Personal Protection	B