

1. Product and Company Identification

De-Oil-It, Industrial Strength Concentrate (ISC) A Hydrocarbon cleaner and degrader

Principle Use: Cleans oils, fuels, and many types of grease

Description: Liquid

Note: Product is a concentrate and requires water as an “activating agent”; users of concentrate product are expected to create an “application solution” which is a ratio of water to product. The most common ratio (a dilution) is 4:1 (meaning 4 parts water and one part product). Contact company for recommendations on dilution factors.

Owner Identification

Greenworld Innovation, Corp
Valrico, Florida 33594
info@deoilit.com
(407) 574-3898

Product Identification

- (a) EPA managed NCP (National Contingency List)
 - ✓ Surface Washing Agent
 - ✓ ID #SW-73 USEPA

- (b) Florida EPA SBIR project
 - ✓ Small Business Innovative Research Project
 - ✓ De-Oil-It is the only product in the SBIR project for storm water run-off

- (c) FDA Gras
 - ✓ “Generally Regarded As Safe”
 - ✓ All De-Oil-It ingredients are on the FDA Gras list

2. Hazards Identification

Emergency Overview

Appearance: Light Opaque Liquid

Physical Hazards: None*

Health Hazards: None*

*hazard summary defined by OSHA Hazard Comm. Std., 29 CFR 1910.1200

Potential Health Effects

General: This health hazard assessment is based on information from commercial and scientific literature. Keep product away from children.

Ingestion: Relative to other cleaning materials, this product is classified as “relatively non-toxic” (non poisonous). Ingestion treatment should consider strong alkaline procedures.

Eye Contact: Product can cause serious eye irritation and should be thoroughly flushed with potable water and then seek immediate medical attention.

Skin Contact: Product is alkaline and can cause dryness of the skin, rinse with potable water.

Skin Absorption: Not likely to be absorbed through skin.

Inhalation: Inhalation of vapors or mists might cause headaches, nausea and irritation of the nose, throat and lungs.

3. Composition / Information on Ingredients

| Ingredient Type | %(w/w) | OSHA PEL |
|-----------------|--------|------------|
| Emulsifier | ----- | Not Listed |
| Solvent | ----- | Not listed |
| Cleaning Agent | ----- | Not listed |
| Solubilizer | ----- | Not listed |
| Water | ----- | Not listed |

Ingredients not precisely identified are proprietary or non-hazardous
 Values are not product specifications

Product exhibits surfactant action when treating soil hydrocarbon contamination / spill
 Product exhibits emulsification of water oil contamination / spill
 Product does not emulsify fuels of water oil contamination / spill (immediately removes)
 Product does not contain solvents
 Product does contain a solubilizer agent to prevent self-aggregation
 Product is considered a liquid soap and as such it is a “cleaning agent”

4. First Aid Measures

Main Hazard: Product is a strong alkaline based chemical.

First Aid – EYES: Immediately flush with plenty of water, preferably potable water. After initial flushing, remove any contact lens and continue flushing for at least 15 minutes. During flushing contact emergency services (911) for precautionary measures, seek medical ER attention especially if in contact with concentrate (non-diluted).

First Aid – SKIN: Wash the material off the skin with soap and plenty of water. If redness or itching or a burning sensation, get medical attention; usually accidental contact with skin causes a dryness sensation.

First Aid – INGESTION: Do not induce vomiting as damage can occur in the esophagus and nasal passage way. An immediate 1-2 glass of water is necessary to dilute ingested materials. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

First Aid – INHALATION: Remove victim to fresh air. If cough or other respiratory symptoms develop, seek medical attention.

5. Fire Fighting Measures

Flashpoint and Method: Will not flash

Autoignition Temperature: Not applicable

Boiling Point Temperature: 620 F

General Hazards: Product is non-flammable

Fire Fighting Instructions: Use extinguishing media suitable for surrounding fire conditions.

Fire Fighting Equipment: Self-containing breathing apparatus with full facepiece and protective clothing.

Hazardous Combustion Products: None known

6. Accidental Release Measures

Light spill measures:

On hard surfaces: Add water to dilute. Then mop up with cloth or paper towels to soak up. Throw away cloth / paper towels.

On soil surfaces: Product has surfactant properties and typically will absorb into the soil. Add water to dilute.

On water: Product should dilute with water and dissolve.

Heavy spill measures: (land or water; hard surfaces such as roads, parking lots)

Call local hazmat authorities for proper response that would be expect to follow various EPA defined guidelines. The product is not considered hazmat / hazardous but due to its strong alkaline base there might be environmental concerns. We recommend diluting the spill area with water to reduce adverse alkaline effects.

7. Handling and Storage

Handling: Avoid eye contact.

Avoid ingestion.

Avoid skin exposure to product

Storage: Product has unlimited shelf life
After uncapping please recap to prevent evaporation.
Diluted "application solution" (water : product ratio) also has unlimited shelf life

If the “application solution” has additives such as enzymes or microbes the shelf life will be determined by these additives and you will not have unlimited shelf life.

Recommended storage temperatures are between 40 F (5 deg C) and 121 F (60 C).

Keep product from freezing, this applies to concentrate and “application solution” (water : product ratio).

8. Exposure Controls/Personal Protection

Exposure Guidelines: No ACGIH TLV or OSHA PEL has been assigned to this product. Minimize exposure in accordance with good hygiene and safety practices .

ACGIH TLV - American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) The threshold limit value of a chemical substance is believed to be a level to which a worker can be exposed day after day for a working lifetime without adverse effects.

OSHA PEL – Occupational Safety and Health Administration (OSHA), Permissible Exposure Limits (PEL) is the maximum upper exposure legal limit to a hazardous substance exposure that an employee can be exposed to in an 8-hour period.

Engineering controls: Use ventilation adequate to maintain safe levels especially indoors. Provide eyewash station and a safety shower in work area.

Respiratory Protection: Normally not needed if engineer controls are adequate.

Protective Clothing: Clothing adequate to protecting skin.

Eye Protection: Recommend goggles especially diluting / mixing and applying product.

9. Chemical and Physical Properties

Appearance: Relatively clear is slightly opaque

Boiling Point: 620 F (326 C)

| | |
|-----------------------------|---|
| <u>Vapor Pressure:</u> | No measurable pressure |
| <u>Vapor Density:</u> | Not applicable |
| <u>Solubility in Water:</u> | Soluble |
| <u>pH:</u> | Strong alkaline in concentrate form; diluting to create “application solution” (water : product ratio) drops pH to mild to medium alkalinity. |
| <u>Specific Gravity:</u> | 1.1959 @ 60 F (15 C), does not sink in water. |
| <u>% volatile:</u> | Non-volatile |
| <u>Nauseous Fumes:</u> | The product has an alcohol odor, advice to not inhale. “Application solution” has a eucalyptus like odor, advice not to inhale. |
| <u>Application Notes:</u> | Does not sink treated oil slicks on water. Creates an emulsified layer of treated oil on water (does not sink oil!). Immediately removes FLASHPOINT of hydrocarbons (fuel, oil, etc.). Immediately removes nauseous fumes of hydrocarbons (fuel, oil, etc.). Concentrate is not intended to be used alone; product requires dilution using water. |

10. Stability and Reactivity

| | |
|--|--------------------------------|
| <u>Stability:</u> | Stable under normal conditions |
| <u>Incompatibility:</u> | None known |
| <u>Hazardous Decomposition Products:</u> | None Known |
| <u>Hazardous Polymerization:</u> | Will not occur |

11. Toxicology Information

Possible human health effects:

Inhalation: Inhalation of mists may cause irritation of respiratory passages

Skin Contact: Can cause dryness of skin and possibly irritations
Eye Contact: Will cause irritation of eyes, apply first aid immediately
Ingestion: Seek medical attention, provide water, and do not induce vomiting.

Other effects: Overexposure: none known but could cause chronic conditions.

Note to physician: Treat as strong alkalinity exposure
All ingredients while not on the GRAS list are classified as relatively non-toxic.

Possible health effects aquatic life:

Product action exhibits surfactant properties; this along with a strong alkalinity base is regarded in laboratories as the main cause of LD50 results. This applies certainly to the concentrate form; however, relative to other products on the market and on NCP list for example, this product is regarded as relatively moderately toxic in its “application solution” form (meaning diluted in a water : product ratio).

Possible health effects plant life:

There are no studies or laboratory reports relevant to product concentrate form exposure to plant life; however, due to the strong alkalinity base the concentrate form should be regarded as harmful to plant life. In the “application solution” form (water : product diluted ratio) there is a study whereby hydrocarbons were substantially reduced to negligent levels, grass re-grew, and cows grazed unharmed.

Possible health effects of animals:

Regard effects of animals to be similar to humans.

12. Ecological Information

When applied properly in an “application solution” (water : product dilution) has not shown harmful effects to aquatic life, wildlife or agriculture.

The pure form of the product, in concentrate form is not expected to be used as an “application solution” and therefore can cause considerable ecological harm mostly due to the strong alkalinity. This product requires dilution using water. Call to get assistance on dilution ratios.

Laboratory tests confirm “application solution” applied to hydrocarbons (oil, fuel) combined mixture averages low 8 pH range, over time and added water the combined mixture

("application solution" + hydrocarbon – oil, fuel, etc) averages high 7 pH. The optimal range for biodegrading is 7.2-7.8 but still performs well in low 8 pH range. The point is the product ingredients plus alkalinity is first responsible for breaking down hydrocarbons; after time, and additional soaking water the pH is optimized to promote biodegrading to complete the degrading of hydrocarbons to negligent to non-detect levels applied correctly.

13. Disposal Consideration

- Disposal method: Discarded product is not a hazardous waste under RC, 40 CFR 261.
- Container method: Empty containers not returned retains product residue. Observe all applicable hazard precautions. Do not distribute, make available, furnish or reuse empty containers except for storage and shipment of original product. Remove all product residues from container and puncture or otherwise destroy. We encourage you to find an authorized recycler.
- Returning container: Under certain conditions we are able to approve returning containers to be re-used for new batches of product. We will handle the residue cleaning if part of the contract.
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14. Transportation Information

- DOT Hazard Description: Not regulated
- Domestic USA transportation code: NMFC Code 48580-3, class 70
- International HS code: 3402.90.90

NMFC- National Motor Freight Classification; HS – Harmonized System Code

15. Regulatory Information

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710

All product ingredients are listed on the TSCA Chemical Substances inventory and are all regarded as non-toxi

CERLA (Comprehensive Environmental Response, Compensation, and Liability Act) and SARA (Superfund Amendments and Reauthorization Act) regulations, 40 CFR 355, 370, 372

This product does not contain any chemicals subject to the reporting requirements under CERLA / SARA

California Proposition 65

Officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986

This product does not contain any chemical that would cause cancer or reproductive harm as required listing under CP-65

GRAS (Generally Regarded as Safe)

Not on list as this product is not intended to be part of Food, Drug or Cosmetic products.

Basic Product Purpose

This product is a kind of liquid soap that has shown to degrade, break down and “eat” oil / fuel

16. Other Information

This information is given in good faith.

HMIS is intended for everyday safety, while **NFPA** is intended for safety during emergency situations, especially fires.

HMIS - was developed by the National Paint and Coatings Association (NPCA), A Homeless Management Information System (**HMIS**) is a local information technology system **used to** collect client-level data and data on the provision of housing and services to homeless individuals and families and persons at risk of homelessness

NFPA -The National Fire Protection Association, has developed a system for indicating the health, flammability and reactivity hazards of chemicals. In addition, a special precaution symbol may be used where necessary.

HMIS and NFPA Ratings

| <u>Hazard:</u> | <u>HMIS Ratings:</u> | <u>NFPA Ratings:</u> |
|----------------------|----------------------|----------------------|
| <u>Health:</u> | 1 | 1 |
| <u>Flammability:</u> | 0 | 0 |
| <u>Reactivity:</u> | 0 | 0 |

| <u>HMIS and NFPA Hazard Rating Codes:</u> | | | | |
|---|------------|--------------|----------|------------|
| 0 - Least | 1 - Slight | 2 - Moderate | 3 - High | 4 - Severe |

TRADE NAMES

ecoSpersa is the generic factory name for this product. It is manufactured for other companies under various trade names such as, but not limited to: Petro Buster, De-Oil-It, De-Grease-It, Malone 98.

DE-OIL-IT INDUSTRIAL STRENGTH CONCENTRATE ISC® (SDS) SAFETY DATA SHEET v12/2021

EPA managed NCP LIST information (copy)

TECHNICAL PRODUCT BULLETIN

NCP ID #SW-73 USEPA

OEM REGULATIONS IMPLEMENTATION DIVISION LISTING

DATE: SEPTEMBER 29, 2021

“DE-OIL-IT INDUSTRIAL STRENGTH CONCENTRATE”

NAME, BRAND, OR TRADEMARK DE-OIL-IT INDUSTRIAL STRENGTH CONCENTRATE

Type of Product: Surface Washing Agent

NAME, ADDRESS, AND TELEPHONE NUMBER OF MANUFACTURER/CONTACT

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3813 Highgate Drive

Valrico, FL 33594

Phone: (407) 574-3898

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Website: www.deoilit.com

(Mr. Ron McCarthy, CEO, or Mr. Danny Schillaci, COO)

NAME, ADDRESS, AND TELEPHONE NUMBER OF PRIMARY DISTRIBUTORS

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SPECIAL HANDLING AND WORKER PRECAUTIONS FOR STORAGE AND FIELD APPLICATION

1. Flammability: Non-flammable.
2. Ventilation: No mechanical ventilation required; fresh air supply recommended for inside confined spaces.
3. Skin and eye contact; protective clothing; treatment in case of contact: May cause eye irritation, manufacturer recommends use of goggles during application. In case of eye contact, flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. For skin contact, wash exposed skin with soap and water. If redness, itching or a burning sensation develops get medical attention.
 - 4.a. Maximum storage temperature: 120°F continuous, 140°F up to 5 days.
 - 4.b. Minimum storage temperature: 35°F.
 - 4.c. Optimum storage temperature range: 40°F to 120°F.

4.d. Temperatures of phase separations and chemical changes: Stable; however, avoid freezing application solution (concentrated product diluted with water) to avoid possible separation.

V. SHELF LIFE

The shelf life of unopened containers is unlimited. Containers should remain capped when not in use to prevent contamination or evaporation. Activated concentrate (i.e., product diluted with water) has unlimited shelf life if kept capped.

VI. RECOMMENDED APPLICATION PROCEDURE

1. Application Method: Product is to be used in diluted form and works just as well with fresh or salt water. This product works well with all types of oils contaminating shorelines, beaches, and rocks. Dilute to 30:1 (this is the application solution comprised of 30 parts water and one part product), spray on surface areas, and allow soaking time for 15 minutes before rinsing with water. For stubborn oil cleanup, after soaking, scrub with brush before rinsing. Spraying means using mechanical methods such as a pump that can deliver 30 psi or greater. Rinsing is best performed with a pressure washer if available. Prior to application, use booms to prevent the product and oil mixture from entering open water. Water run-off can be collected by a vacuum apparatus as surface tension of the treated oil is reduced making pick up efforts easier (should not stick to vacuuming). The product and oil mixture, along with containment materials, should be disposed of according to local, state, and federal regulations.

2. Concentration/Application Rate: The volume of an application solution for shoreline cleanup means adding water (30 parts) to product (one part) and is dependent on size of cleanup area. In general the calculation of application solution (water plus product) volume in gallons is $(\text{Length} \times \text{Width}) \times (0.08)$ – scale is in feet.

As an example, a boundary of contaminated shoreline measuring
50 feet x 12 feet

(b) This would be 600 square feet.

(c) This would be 600 square feet.

✓ This would be 600 square feet.

600 square feet * 0.08 = 48 gallons, at 30:1 dilution ratio

✓ This would be 1.5 gallons of product and 46.5 gallons of water.

Water does not need to be filtered and can be salt or fresh.

3. Conditions for Use: Outside air temperature of 50°F to 125°F is optimal; otherwise, there is no specific restrictions outside this range other than avoid freezing of application solution.

Water temperature for activating the application solution produces optimal performance between 95°F to 125°F; otherwise, there is no specific restrictions outside this range other than avoid freezing application solution.

Water source for application solution can be fresh, or a non-potable source such as natural sources (i.e., lakes, ocean).

DE-OIL-IT INDUSTRIAL STRENGTH CONCENTRATE ISC® (SDS) SAFETY DATA SHEET v12/2021

Ambient water temperature at source of oil spill should be above 35°F. Do not freeze product, possible separation could occur.

Manufacturer resting time of dilution application solution includes:

- When creating a diluted application solution according to a selected dilution ratio, the combined solution of water and product needs to rest.
- Resting time of 30 minutes to one hour stabilizing at ambient temperature to which you are to apply the application solution is optimal.

VII. TOXICITY AND EFFECTIVENESS

Toxicity:

a.

| Material Tested Species LC50 (ppm) | Material Tested Species LC50 (ppm) | Material Tested Species LC50 (ppm) |
|------------------------------------|------------------------------------|------------------------------------|
| DOI Industrial Strength | Menidia beryllina | 144.59 96-hr |
| DOI Industrial Strength | Mysidopsis bahia | 76.64 48-hr |
| No. 2 Fuel Oil | Menidia beryllina | 10.55 96-hr |
| No. 2 Fuel Oil | Mysidopsis bahia | 3.90 48-hr |
| DOI and No. 2 Fuel Oil | Menidia beryllina | 4.65 96-hr |
| DOI and No. 2 Fuel Oil | Mysidopsis bahia | 4.13 48-hr |
| Reference Toxicant (DSS) | Menidia beryllina | 3.98 96-hr |
| Reference Toxicant (DSS) | Mysidopsis bahia | 8.36 48-hr |

Effectiveness: NA

VIII. MICROBIOLOGICAL ANALYSIS NA IX. PHYSICAL PROPERTIES

1. Flash Point: >212°F
2. Pour Point: 26°F
3. Viscosity: 1.505 cst @ 40°C
4. Specific Gravity: 1.1959 @ 60°F
5. pH: 12.9 *
6. Surface Active Agents: Anionic and nonionic surfactants, proprietary
7. Solvents: CONFIDENTIAL.
8. Additives: CONFIDENTIAL.
9. Solubility in Water: High solubility in water.

* De-Oil-It in contact with Hydrocarbons and Water changes the pH from 7.2 to 8.3

X. ANALYSIS FOR HEAVY METALS, CYANIDE, AND CHLORINATED HYDROCARBONS

| COMPOUND | CONCENTRATION (PPM) |
|--------------------------|---------------------|
| Arsenic | <0.050 |
| Cadmium | <0.025 |
| Chromium | <0.015 |
| Copper | <0.050 |
| Lead | <0.050 |
| Mercury | |
| Nickel | |
| Zinc | |
| Cyanide | |
| Chlorinated Hydrocarbons | |