



## GUIDE TO

# Oil & Tar Residue Clean-Up

## How to safely and effectively clean surfaces contaminated with oil and tar

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The Deep Horizon Oil Spill has created serious new cleaning challenges throughout the Gulf Region and beyond. In response to this crisis, Zep Inc. has developed specific guidelines and recommendations for cleaning a number of surfaces affected by oil and tar residue.

**This guide is designed to aid in the safe, efficient clean-up of oil-contaminated items and equipment.** It does not attempt to be comprehensive, nor is it a substitute for governmental guidance for oil spill clean-up workers and volunteers. Further, this guide is not intended for first responders who are directly involved with the spill in open water.

Before using the information you'll find here, please review and follow all safety recommendations and local government requirements.



## GUIDE TO

# Oil & Tar Residue Clean-Up

**General Information & Resources** . . . . . pg 2

### **Safety & Health**

What are the components of the oil spill? . . . . . pg 2  
General safety information. . . . . pg 3  
What are the health risks from the oil and contaminated debris? . . . pg 3

### **Zep's Recommended Cleaning Guidelines & Procedures by Surface Type**

Bare or Stained Wood Surfaces (e.g. decks, fences). . . . . pg 4  
Masonry Surfaces (e.g. concrete sidewalks, brick walls). . . . . pg 4-5  
Painted Surfaces (e.g. painted wood, painted metal) . . . . . pg 5-6  
Bare Metal Surfaces (e.g. buildings, railings, doors). . . . . pg 6-7  
Synthetic Surfaces (e.g. vinyl, plastic, fiberglass) . . . . . pg 7  
Glass Surfaces (e.g. windows, windshields) . . . . . pg 8  
Cotton Canvas (e.g. awnings, cushions). . . . . pg 8  
Laundry (e.g. clothing, uniforms, towels, rags) . . . . . pg 9  
Carpet . . . . . pg 9-10  
Hand Care . . . . . pg 10  
Skin Care and Protection. . . . . pg 11

# General Information & Resources

As the oil becomes more widely dispersed and moves inland, it may become more difficult for the general public to avoid contact. A large storm or hurricane could also drive oil or oil-contaminated debris inland. For more information on hurricanes and the oil spill, go to this website sponsored by NOAA (National Oceanic & Atmospheric Administration):

[http://response.restoration.noaa.gov/book\\_shelf/2076\\_hurricanes\\_oil.pdf](http://response.restoration.noaa.gov/book_shelf/2076_hurricanes_oil.pdf)

The cleaning suggestions included in this guide will help you to effectively remove oil, grease and tar residues occurring from any source.

- Always wear the proper protective gear and follow the safety guidelines outlined here.
- Read label directions completely and follow safety and disposal recommendations found on the label or Material Safety Data Sheet (MSDS).
- There are several recommended methods for each application. Choose the method which best fits your situation.

## ADDITIONAL RESOURCES

National Oceanic and Atmospheric Association  
<http://www.noaa.gov/>

NOAA Fisheries Service  
[http://sero.nmfs.noaa.gov/deepwater\\_horizon\\_oil\\_spill.htm](http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm)

Deepwater Horizon Response  
<http://www.deepwaterhorizonresponse.com/go/site/2931/>

OSHA oil spill safety fact sheet  
<http://www.osha.gov/oilspills/deepwater-oil-spill-factsheet-ppe.pdf>

What is a Tarball?  
[http://sero.nmfs.noaa.gov/sf/deepwater\\_horizon/tarballs.pdf](http://sero.nmfs.noaa.gov/sf/deepwater_horizon/tarballs.pdf)

Components and Characteristics of Deepwater Horizon Oil Spill  
[http://sero.nmfs.noaa.gov/sf/deepwater\\_horizon/OilCharacteristics.pdf](http://sero.nmfs.noaa.gov/sf/deepwater_horizon/OilCharacteristics.pdf)

National Institute of Environmental Health Services (NIEHS)  
<http://tools.niehs.nih.gov/wetp/index.cfm?id=2495>

Environmental Protection Agency (EPA)  
<http://www.epa.gov/bpspill/>

## Safety & Health

### OSHA

The following safety information was compiled from a training tool composed by OSHA (Occupational Safety and Health Administration) and the NIEHS (National Institute of Environmental Health Sciences). The entire presentation may be found at <http://tools.niehs.nih.gov/wetp/index.cfm?id=2495>.

### WHAT ARE THE COMPONENTS OF THE OIL SPILL?

- An oil spill is the release of a liquid petroleum hydrocarbon into the environment due to human activity, and is a form of pollution. The April 2010 Gulf of Mexico oil spill involves crude oil released from the explosion of an off-shore drilling rig.
- Crude oil is a complex mixture of volatile and nonvolatile hydrocarbon compounds ranging from light aliphatic and aromatic compounds (volatile) to heavy and viscous oils (nonvolatile).
- The medium and heavy components of crude oil, which has the consistency of thick motor oil is what cleanup operations on the land and near shore areas focus on.
- The crude oil changes over time as the volatile part evaporates and the oil weathers and rots (degrades) and mixes with sea water, seaweed and other vegetation and debris.
- Weathering of oil occurs rapidly at first and slows down over time as light and medium hydrocarbon chains are evaporated or dissolved away by sunlight, waves, and winds.
- Weathered crude or "mousse" is crude petroleum that has lost much of its more volatile components and has mixed with sea water and organic matter.
- Weathering is a series of chemical and physical changes that cause spilled oil to break down and become heavier than water. Winds, waves, and currents may result in natural dispersion, breaking a slick into droplets which are then distributed throughout the water. These droplets may also result in the creation of a secondary slick or thin film on the surface of the water.
- Weathering processes eventually create a tarball that is hard and crusty on the outside and soft and gooey on the inside. Turbulence in the water or beach activity from people or animals may break open tarballs, exposing their softer, more fluid centers.
- Inside of storage containers and bags, oily waste will degrade over time, especially in high temps and give off foul smelling and possibly toxic gases and vapors.

## GENERAL SAFETY INFORMATION

### ***Ways chemicals enter the body - Via skin contact/absorption, inhalation, ingestion, or injection.***

- **Contact/Absorption** - Some chemicals can cause irritation or rashes (dermatitis) if they touch your skin. For certain chemicals, once they touch the skin, they are absorbed and go into the bloodstream, sometimes without causing any visible damage to your skin (e.g., a rash). If chemicals get inside of your body, they may be able to pass through to your bloodstream and be carried to other organs and parts of your body. Some areas are more at risk than others (e.g., eye, groin, wrists, forehead). Proper Personal Protective Equipment (PPE) use prevents this. Open wounds can increase absorption.
- **Inhalation** - When airborne chemicals enter your lungs, they can be absorbed into your bloodstream. Airborne chemicals are breathed in through the mouth or nose. Gases and vapors can reach the deep lungs. Particle and droplet size affects where the chemical settles in the respiratory tract. Where the chemical settles in the respiratory tract influences symptoms and diseases.
- **Ingestion** - Chemical is swallowed through your mouth and is absorbed through the digestive tract. To minimize ingestion, good hygiene practices need to be observed. Follow your employer's decontamination procedures in the HASP (Health and Safety Plans), which should include a way to wash before eating, drinking, using toilet (NOTE: This can be difficult in very remote locations). Oil can rub off dirty hands and contaminate food, drinks or tobacco products. Chemicals in the air can settle on food or drink and be swallowed. Swallowed chemicals are absorbed in the digestive tract. Chemicals can be caught in mucus and swallowed.
- **Injection** - The chemical enters the body through a sharp object like a needle. Injection may occur when a worker is cut or their skin is punctured by a sharp, contaminated object such as metal, glass or a needle. Disaster response and cleanup frequently requires handling of debris containing sharp objects. When handling sharp objects and debris that may be contaminated, wear a protective, durable work glove over your chemical protective glove.

## WHAT ARE THE POTENTIAL HEALTH RISKS FROM THE OIL AND CONTAMINATED DEBRIS?

- **Health Risks of Weathered Crude Oil**
  - Potential dermatitis hazard from skin contact.
  - Inhaling oil droplets/ oily particles put into the air during cleanup operations can be irritating to eyes, nose, throat and lungs.
- **Health Risks of Tarballs**
  - The most common reaction to the chemicals in tarballs is an allergic reaction or developing rashes. This can happen even from brief contact with oil. In general, contact with oil should be avoided.
- If contact occurs, wash the area with soap and water, or baby oil.
- Little is known about longer term exposure to tarballs. Use PPE when you come into contact with tarballs.
- **Other Risks**
  - Include heat stress, insect bites, sunburn, eye injuries, noise exposure, slips, trips, and falls.
  - If working outside be sure to wear sunscreen and apply insect repellent if needed.

# Zep's Recommended Cleaning Guidelines & Procedures by Surface Type

## **BARE OR STAINED WOOD SURFACES (E.G. DECKS, FENCES)**

### **METHOD: LOW PRESSURE WASHING**

- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: Apply a general purpose degreaser (dilute per label directions) to the wood using a low pressure sprayer. Work in manageable sections; the degreaser should not be allowed to dry on the surface. On vertical surfaces, such as a fence, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 3: Agitate area with a deck brush.
- STEP 4: Rinse thoroughly with a low psi (less than 1000 psi) pressure washer with a wide angle spray\* or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking.

\*High pressure and a low angle nozzle may damage (cut) wood surfaces.

#### **RECOMMENDED PRODUCT TYPE:**

Low to moderate foaming, water-dilutable, alkaline, general purpose degreaser

#### **Recommended Zep products for this application:**

Zep A-One, Zep Tuff Green Concentrate, Zep Z-Green, Zep Formula 22

### **METHOD: BUCKET & BRUSH**

- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: Apply a general purpose degreaser to the wood using a mop or deck brush. Work in manageable sections; the degreaser should not be allowed to dry on the surface. On vertical surfaces, such as a fence, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 3: Agitate the area with a deck brush.
- STEP 4: Rinse thoroughly with a low psi (less than 1000 psi) pressure washer with a wide angle spray\* or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking.

\*High pressure and a low angle nozzle may damage (cut) wood surfaces

#### **RECOMMENDED PRODUCT TYPE:**

Moderate to high foaming, water-dilutable, alkaline, general purpose degreaser

#### **Recommended Zep products for this application:**

Zep Tuff Green Concentrate, Zep Multi-Clean Green, Zep Formula 50, Zep SIC-520, Zep Z-Green

## **MASONRY SURFACES (E.G. CONCRETE SIDEWALKS, BRICK WALLS)**

If oil is pooled on the surface of the concrete, use an absorbent material such as clay litter or oil absorbent pads. After removing absorbent, proceed with one of the cleaning methods below.

#### **RECOMMENDED PRODUCT TYPE:**

an oil-only (will not absorb water) or universal (all liquids) granular or powdered absorbent, absorbent socks, or absorbent pads.

#### **Recommended Zep products for this application:**

Zep Peat Sorb, Zorbent, or Zep-O-Zorb, Gator Tails, Rapid-Sorb Pads, Oil Only Rapid-Sorb Pads

### **METHOD: PRESSURE WASHING - HIGH PRESSURE**

- STEP 1: Apply a low foaming general purpose degreaser through a pressure washer. Application as either a low pressure spray or high pressure spray is acceptable depending upon equipment capabilities and manufacturer's recommendations. Dilute product according to label directions and equipment manual. If it is a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 2: Rinse thoroughly with high pressure (typically 1500 psi or greater for best results). On vertical surfaces, rinse from the top down to avoid streaking.

#### **RECOMMENDED PRODUCT TYPE:**

Low to moderate foaming, heavy-duty, alkaline, concentrated degreaser with water-based solvency, surfactants, and detergents.

#### **Recommended Zep products for this application:**

Zepride, Zepride-E, Zep Formula 22

## METHOD: PRESSURE WASHING WITH PRE-SPOTTING

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- STEP 1: Pre-treat heavily soiled area with a heavy duty degreaser before general pressure washing. If required, dilute product according to label directions and apply directly to the visible oil stains.
- STEP 2: Agitate area with a stiff bristled brush.
- STEP 3: Pressure wash the area as directed in method above; rinse thoroughly.

### RECOMMENDED PRODUCT TYPE:

Emulsifiable (water rinsing) products with high solvent content, preferably solvents that are biodegradable and derived from renewable resources.

### Recommended Zep products for pre-treatment application:

Big Orange, Big Orange-E, Soy Response, Orange Response

## METHOD: FOAM APPLICATION

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Certain types of pressure washers are equipped with a low pressure soap application which typically involves a nozzle change to a “soap” nozzle. This method is most beneficial on vertical surfaces where extended contact time between the degreaser and surface is achieved through a “clinging” foam. Specific foaming equipment may also be utilized.

- STEP 1: Use a moderate to high foaming general purpose degreaser through the pressure washer set up for low pressure “soap” application or through alternate foaming equipment. Dilute product according to label directions and equipment manual. If it is a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 2: Rinse thoroughly with high pressure. On vertical surfaces rinse from the top down to avoid streaking.

### RECOMMENDED PRODUCT TYPE:

Moderate to high foaming, heavy-duty, alkaline, concentrated degreaser with water-based solvency, surfactants, and detergents.

### Recommended Zep products for pre-treatment application:

Formula 50, Tuff Green Concentrate

## METHOD: BIOLOGICAL DEGREASER

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Treat heavily soiled area with a biological degreaser. If required, dilute product according to label directions and apply directly to the visible oil stains. A biological product contains bacteria which will penetrate deep into the pores of the concrete to actually digest the oil over time. Follow label directions for best results.

### RECOMMENDED PRODUCT TYPE:

A neutral to moderate pH degreaser formulated with a blend of emulsifiers, surfactants, and biological (bacteria-based) additives targeted for the digestion of petroleum based oil.

### Recommended Zep products for pre-treatment application:

Zep Bio-Concrete

## PAINTED SURFACES (E.G. PAINTED WOOD, PAINTED METAL)

Painted surfaces must be cleaned with caution or the paint may be damaged, discolored or removed. The following cleaning methods are for items such as painted wood siding, painted metal buildings, painted outdoor furniture, etc. Products should be tested in an inconspicuous area for compatibility before general cleaning. When using a pressure washer for washing or rinsing an appropriate temperature and pressure must be maintained to avoid damage to paint.

## METHOD: PRESSURE WASHING

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For sensitive paints or coatings that may be harmed by high pressure and high temperature water, a low psi (less than 1000 psi) pressure washer with cold water is recommended. For more durable paints and coatings, the below method may be employed utilizing high pressure (greater than 1500 psi).

- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: Apply a mild general purpose degreaser (dilute per label directions) to the surface using low pressure. Work in manageable sections; the degreaser

### RECOMMENDED PRODUCT TYPE:

Low to moderate foaming, water-dilutable, alkaline, general purpose degreaser

### Recommended Zep products for this application:

Zep Tuff Green Concentrate, Zep Z-Green, Zep Multi-Clean Green

should not be allowed to dry on the surface. If it is a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.

STEP 3: Agitate area with a soft bristled brush.

STEP 4: Rinse thoroughly with a low psi pressure washer with a wide angle spray or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking.

## **METHOD: MOP & BUCKET / BRUSH & BUCKET / SPONGE & BUCKET**

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STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.

STEP 2: Dilute a mild general purpose degreaser into a bucket and apply to surface using a mop, soft brush, or sponge. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.

STEP 3: Rinse thoroughly with a low psi pressure washer with a wide angle spray or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking. If sprayer is unavailable, add clean cold water to the bucket and apply to the surface.

### **RECOMMENDED PRODUCT TYPE:**

Moderate to high foaming, water-dilutable, alkaline, general purpose degreaser

### **Recommended Zep products for this application:**

Zep Tuff Green Concentrate, Zep Z-Green, Zep Multi-Clean Green

## **METHOD: FOAMING APPLICATION**

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STEP 1: Use a moderate to high foaming general purpose degreaser through the spray washer set up for low pressure "soap" application. Dilute product according to label directions and equipment manual. When cleaning a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.

STEP 2: Rinse thoroughly with low or high pressure, depending on the durability of the paint or coating being cleaned. On vertical surfaces, rinse from the top down to avoid streaking.

### **RECOMMENDED PRODUCT TYPE:**

Moderate to high foaming, water-dilutable, alkaline, general purpose degreaser

### **Recommended Zep products for this application:**

Zep Tuff Green Concentrate, Zep Multi-Clean Green, Zep Formula 50, Zep SIC-520, Zep Z-Green

## **METHOD: SPRAY & WIPE**

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STEP 1: Rinse or wipe away any surface dirt which may interfere with deep cleaning.

STEP 2: Dilute a mild general purpose degreaser into a sprayer and apply to surface or use a ready-to-use (pre-diluted) product. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.

STEP 3: Use a sponge, rag or paper towel to wipe the cleaner and the oil from the surface.

### **RECOMMENDED PRODUCT TYPE:**

Moderate to high foaming, water-dilutable or ready-to-use, alkaline, general purpose degreaser

### **Recommended Zep products for this application:**

Zep Tuff Green Concentrate, Zep Multi-Clean Green, Zep Z-Green, Zep Tuff Green RTU, Zep Citrus Cleaner, Zep Formula 50 RTU

## **BARE METAL SURFACES (E.G. BUILDINGS, RAILINGS, DOORS)**

### **METHOD: PRESSURE WASHING – LOW PRESSURE**

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STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.

STEP 2: Apply a general purpose degreaser (dilute per label directions) to the metal using a low pressure sprayer. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.

STEP 3: Agitate area with a stiff bristled brush.

STEP 4: Rinse thoroughly with low psi (less than 1000 psi) pressure washer or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking.

### **RECOMMENDED PRODUCT TYPE:**

Low to moderate foaming, heavy-duty, alkaline, concentrated degreaser with water-based solvency, surfactants, and detergents

### **Recommended Zep products for this application:**

Zepride, Zepride-E, Zep Formula 22

## METHOD: SPRAY WASH – HIGH PRESSURE

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- STEP 1: Use a low foaming general purpose degreaser through a pressure washer. Dilute product according to label directions and equipment manual. When cleaning a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 2: Rinse thoroughly with high pressure. On vertical surfaces, rinse from the top down to avoid streaking.

### RECOMMENDED PRODUCT TYPE:

Low to moderate foaming, heavy-duty, alkaline, concentrated degreaser with water-based solvency, surfactants, and detergents

### Recommended Zep products for pre-treatment application:

Zepride, Zepride-E, Zep Blast Away, Zep Formula 22

## SYNTHETIC SURFACES (E.G. VINYL, PLASTIC, FIBERGLASS)

Synthetic surfaces must be cleaned with caution or the item may be damaged. The following cleaning methods are for items such as vinyl awnings, vinyl boat seats, plastic outdoor furniture, Fiberglas jet skis & boats (out of water cleaning), etc. Always test product first for compatibility.

## METHOD: SPRAY WASH - LOW PRESSURE

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- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: Apply a mild general purpose degreaser (dilute per label directions) to the surface using a low pressure sprayer. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 3: Agitate area with a soft bristled brush.
- STEP 4: Rinse thoroughly with low psi (less than 1000 psi) pressure washer or with a garden hose sprayer. On vertical surfaces rinse from the top down to avoid streaking.

### RECOMMENDED PRODUCT TYPE:

Low to moderate foaming, water-dilutable, alkaline, general purpose degreaser

### Recommended Zep products for this application:

Zep Tuff Green Concentrate, Zep Z-Green, Zep Multi-Clean Green

## METHOD: MOP & BUCKET / BRUSH & BUCKET / SPONGE & BUCKET

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- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: Dilute a mild general purpose degreaser into a bucket and apply to surface using a mop, soft brush, or sponge. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 3: Rinse thoroughly with spray washer on low pressure or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking. If sprayer is unavailable, add clean water to the bucket and apply to the surface.

### RECOMMENDED PRODUCT TYPE:

Moderate to high foaming, water-dilutable, alkaline, general purpose degreaser

### Recommended Zep products for this application:

Zep Tuff Green Concentrate, Zep Multi-Clean Green, Zep Formula 50, Zep SIC-520, Zep Z-Green

## METHOD: SPRAY & WIPE

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- STEP 1: Rinse or wipe away any surface dirt which may interfere with deep cleaning.
- STEP 2: Dilute a mild general purpose degreaser into a sprayer and apply to surface or use a ready-to-use (pre-diluted) product. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, such as a wall, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 3: Use a sponge, rag or paper towel to wipe the cleaner and the oil from the surface.

### RECOMMENDED PRODUCT TYPE:

Moderate to high foaming, water-dilutable or ready-to-use, alkaline, general purpose degreaser

### Recommended Zep products for this application:

Zep Tuff Green Concentrate, Zep Multi-Clean Green, Zep Z-Green, Zep Tuff Green RTU, Zep Citrus Cleaner, Zep Formula 50 RTU

## GLASS SURFACES (E.G. WINDOWS, WINDSHIELDS)

### METHOD: SPRAY WASH – LOW PRESSURE (FOR LARGE AREAS)

- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: Apply a glass cleaner (dilute per label directions) to the glass using a low pressure sprayer. Work in manageable sections; the cleaner should not be allowed to dry on the surface. Apply the cleaner from the bottom to the top to avoid streaking.
- STEP 3: Rinse thoroughly with low psi (less than 1000 psi) pressure washer or with a garden hose sprayer. On vertical surfaces, rinse from the top down to avoid streaking. Use a squeegee to remove excess water & reduce spotting.

#### RECOMMENDED PRODUCT TYPE:

Concentrated, free-rinsing, non-streaking, non-spotting glass cleaner

#### Recommended Zep products for this application:

Zep GreenLink™ Glass Cleaner, Zep Concentrated Glass Cleaner

### METHOD: SPRAY & WIPE (FOR SMALL AREAS)

- STEP 1: Apply a glass cleaner (dilute per label directions, if required) to the glass using a low pressure sprayer or ready-to-use product. Work in manageable sections; the cleaner should not be allowed to dry on the surface. Apply the cleaner from the bottom to the top to avoid streaking.
- STEP 2: Wipe with a clean towel or rag.

#### RECOMMENDED PRODUCT TYPE:

Ready-to-use or concentrated, free-rinsing, non-streaking, non-spotting glass cleaner

#### Recommended Zep products for this application:

Zep GreenLink™ Glass Cleaner, Zep Concentrated Glass Cleaner, Zep Vue RTU, Zep RTU Glass Cleaner, Zep Mirror & Glass, Zep 40

## COTTON CANVAS (E.G. AWNINGS, CUSHIONS)

### METHOD: PRESSURE WASHING - LOW PRESSURE

- STEP 1: Rinse away any surface dirt which may interfere with deep cleaning.
- STEP 2: For heavy oil or tar stains, the canvas can be pre-treated with a heavy duty degreaser. Use a soft brush to work the cleaner into the stain.
- STEP 3: Apply a mild general purpose degreaser (dilute per label directions) to the entire surface using a low pressure sprayer. Work in manageable sections; the degreaser should not be allowed to dry on the surface. When cleaning a vertical surface, apply the cleaner from the bottom to the top to avoid streaking.
- STEP 4: Rinse thoroughly with low psi (less than 1000 psi) pressure washer or with a garden hose sprayer. On vertical surfaces rinse from the top down to avoid streaking.

#### RECOMMENDED PRODUCT TYPE FOR PRE-TREATMENT:

Emulsifiable (water rinsing) products with high solvent content

#### Recommended Zep products for pre-treatment:

Zep Oil & Grease Stain Remover, Zep Orange Gel Degreaser

#### RECOMMENDED PRODUCT TYPE FOR GENERAL CLEANING:

Low to moderate foaming, water-dilutable, alkaline, general purpose degreaser

#### Recommended Zep products for general cleaning:

Zep Tuff Green Concentrate, Zep Z-Green, Zep Multi-Clean Green, Zep A-One

## LAUNDRY (E.G. CLOTHING, UNIFORMS, TOWELS, RAGS)

Synthetic fabrics such as polyester and nylon must be treated differently than cotton fabrics. If oil, grease or tar is visibly present on the fabric, it must be pre-treated before going into the washing machine.

### METHOD: LAUNDRY – COTTON FABRICS

- STEP 1: Pre-treat stains with a laundry spotter specific to oil or tar.
- STEP 2: Use a soft bristled brush to work the spotter into the fabric.
- STEP 3: Wash in machine with regular laundry detergent.
- STEP 4: Check items before placing in dryer; if stains are still present, repeat the previous steps.

#### RECOMMENDED PRODUCT TYPE FOR PRE-TREATMENT:

Emulsifiable (water rinsing) products with high solvent content designed for laundry application

#### Recommended Zep products for pre-treatment:

Zep Oil & Grease Stain Remover, Zep Orange Gel Degreaser

#### RECOMMENDED PRODUCT TYPE FOR LAUNDRY DETERGENT:

General purpose liquid or powdered laundry detergent; products specifically designed for grease & oil soils are preferable.

#### Recommended Zep products for laundry detergent:

Zeplex, Zep Vantio

### METHOD: LAUNDRY – SYNTHETIC FABRICS

- STEP 1: Pre-treat stains with a water based degreaser.
- STEP 2: Use a soft bristled brush to work the cleaner into the fabric.
- STEP 3: Wash in machine with regular laundry detergent.
- STEP 4: Check items before placing in dryer; if stains are still present, repeat the previous steps.

#### RECOMMENDED PRODUCT TYPE FOR PRE-TREATMENT:

General purpose degreasers without aggressive solvents which may harm synthetic fibers

#### Recommended Zep products for pre-treatment:

Zep Tuff Green RTU

#### RECOMMENDED PRODUCT TYPE FOR LAUNDRY DETERGENT:

General purpose liquid or powdered laundry detergent

#### Recommended Zep products for laundry detergent:

Zeplex, Zep Vantio

## CARPET

### METHOD: CARPET STAIN REMOVAL

- STEP 1: Remove as much of the stain as possible by blotting with an absorbent cloth.
- STEP 2: Choose a carpet spotting product specific to oil, grease or tar removal (always test product compatibility with the carpet before general use).
- STEP 3: Apply product per label directions. In general, a carpet spotter should be sprayed in a circular motion, starting from the outside edge and working towards the center.
- STEP 4: Allow a few minutes of contact time, but be careful to not over-wet the carpet or leave the product on too long. Products that are aggressive enough to break up oil may be aggressive enough to soften the glue on the back of the carpet.
- STEP 5: Blot spot with an absorbent cloth, working from the outside edge of the stain towards the center.

#### RECOMMEND PRODUCT TYPE FOR SPOT REMOVAL:

Carpet stain remover products with a high solvent content.

#### Recommended Zep products for pre-treatment:

Orange Gel Degreaser or X-Out II

## METHOD: EXTRACTION CLEANING

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- STEP 1: Pre-treat any oil spots on the carpet as outlined above.
- STEP 2: Dilute the carpet cleaning product per label directions and add to the solution tank of the extraction carpet cleaning machine.
- STEP 3: Refer to the machine manual for carpet cleaning directions.
- STEP 4: Allow carpet to dry. If stains are still visible, re-treat carpet stain removal steps.

### RECOMMEND PRODUCT TYPE FOR EXTRACTION CLEANING:

Carpet cleaning solution made for use in hot water extraction or other type carpet cleaning units. Product should be water based.

### Recommended Zep products for extraction cleaning:

Zep Lemongrass Extract-It Plus or Zep Carpet 86

## HAND CARE

Protective gloves are essential when working with oil contaminated objects and when working with cleaning chemicals. Always wash your hands thoroughly before eating or using the restroom and upon completion of work, even if you were wearing gloves. If clean rinse water is unavailable, use a waterless hand cleaner and/or an instant hand sanitizer.

## METHOD: HEAVY-DUTY HAND WASHING

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- STEP 1: Wet hands with water and rinse away any surface dirt.
- STEP 2: Apply hand soap.
- STEP 3: Work soap into hands, making sure to clean the backs of the hands, the wrists, and in between fingers. A nail brush may be used.
- STEP 4: Rinse thoroughly with clean water.
- STEP 5: Dry hands with a towel or air dryer.
- STEP 6: A skin moisturizer may be used to avoid chapping.

### RECOMMENDED PRODUCT TYPES:

Heavy-duty hand soap with abrasive designed for heavy grease removal

### Recommended Zep products for this application:

Zep Shell Shock, Zep Cherry Bomb, Zep TKO, Zep Reach

## METHOD: HAND WASHING – LIGHTLY SOILED

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- STEP 1: Wet hands with water.
- STEP 2: Apply hand soap.
- STEP 3: Work soap into hands, making sure to clean the backs of the hands, the wrists, and in between fingers. A nail brush may be used.
- STEP 4: Rinse thoroughly with clean water.
- STEP 5: Dry hands with a towel or air dryer.
- STEP 6: A skin moisturizer may be used to avoid chapping.

### RECOMMENDED PRODUCT TYPES:

General purpose liquid hand soap

### Recommended Zep products for this application:

GreenLink™ Hand Soaps

## METHOD: HAND WASHING – WITHOUT WATER

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- STEP 1: Apply waterless hand soap to hands.
  - STEP 2: Work soap into hands, making sure to clean the backs of the hands, the wrists, and in between fingers.
  - STEP 3: Dry hands with a towel.
- If using a pre-moistened hand cleaner towel, rub the towel over your hands, then discard into a trash receptacle.

### RECOMMENDED PRODUCT TYPES:

Hand soap designed specifically for removal with wiping alone (no water rinsing required). Hand wipes designed specifically for the use on skin (do not use wipes designed for hard surface cleaning).

### Recommended Zep products for this application:

MVP (waterless) or Clean'Ems Hand Cleaner Towels

## SKIN CARE AND PROTECTION

While working outside make sure that you protect your skin from the ultraviolet (UV) light and biting mosquitoes at all times.

### RECOMMENDED PRODUCT TYPE FOR INSECT REPELLENT:

Look for repellents containing DEET. The higher the DEET concentration the longer the product will be effective. A product containing 25-30% DEET will be effective against insects for up to 8 hours.

### Recommended Zep products for this application:

Zep Sta-A-Way Insect Repellent spray (25% DEET) & Zep Sta-A-Way Insect Repellent Towels (30% DEET)

### RECOMMENDED PRODUCT TYPE FOR SUNSCREEN:

The CDC recommends the use of sunscreen with sun protective factor (SPF) 15 or higher and both UVA and UVB protection.

### Recommended Zep products for this application:

Zep Sunscreen Towels (SPF 30+ with UVA & UVB protection)

## Zep Product Index

### PRODUCT ORDERING INFORMATION

The products referenced in the guideline may be ordered from your Zep Sales Representative or by contacting our customer service department at **1-877 I BUY ZEP**. The product number base codes are listed below.

More detailed information on the products listed can be found on [www.zep.com](http://www.zep.com).

#### GENERAL PURPOSE DEGREASERS

Zep A-One (1269)  
Zep Blast Away (0379)  
Zep Formula 22 (0678)  
Zep Formula 50 (0859)  
Zep Multi Clean Green (1249)\*  
Zepride (0567)  
Zepride-E (0410)  
Zep Tuff Green Concentrate (2037)\*  
Zep Z Green (1848)\*  
Zep SIC-520 (4733)  
Zep Citrus Cleaner (0455)  
Zep Tuff Green RTU (0650)\*  
Zep Formula 50 RTU (F500)

#### SOLVENT CLEANERS FOR PRE-TREATMENT OR SPOT CLEANING

Zep Big Orange Liquid (0415)  
Zep Big Orange Aerosol (0114)  
Zep Big Orange-E Liquid (0485)  
Zep Big Orange-E Aerosol (0185)  
Zep Oil & Grease Stain Remover (1561)  
Zep Orange Response (0750)  
Zep Orange Gel Degreaser Liquid (7111)  
Zep Orange Gel Degreaser Aerosol (0001)

Zep Soy Response Liquid (0752)\*  
Zep Soy Response Aerosol (0004)\*

#### BIOLOGICAL DEGREASER

Zep Bio Concrete Cleaner (1660)

#### GLASS CLEANERS

Zep Concentrated Glass Cleaner (1052)  
Zep GreenLink Glass Cleaner (1036)\*  
Zep Vue RTU (1010)  
Zep RTU Glass Cleaner (1170)\*  
Zep Mirror & Glass (0098)  
Zep 40 (0144)

#### PRODUCTS FOR LAUNDRY APPLICATIONS

Zep Oil & Grease Stain Remover (1561)  
Zep Orange Gel Degreaser Aerosol (0001)  
Zep Tuff Green RTU (0650)\*  
Zeplex (0866)  
Zep Vantio (1133)

#### PRODUCTS FOR CARPET CLEANING APPLICATIONS

Zep Orange Gel Degreaser Aerosol (0001)  
X-Out II (0195)  
Zep Carpet 86 (1296)  
Zep Lemongrass Extract-It Plus (1284)\*

#### ABSORBENTS

Zep Gator Tails (9119)  
Zep Oil Only Rapid-Sorb Pads (2299)  
Zep Rapid-Sorb Pads (2294)  
Zep Peat Sorb (9622)  
Zep Zorbent (6995)  
Zep-O-Zorb (2300)

#### HAND CARE

Zep GreenLink Hand Soaps (various)\*  
Zep Cherry Bomb (0951)  
Zep MVP (0927)  
Zep Reach (0925)  
Zep Shell Shock (0849)\*  
Zep TKO (0960)  
Zep Clean'Ems Hand Cleaner Towels (1410)

#### PERSONAL PROTECTION

Zep Sta-A-Way Insect Repellent (0301)  
Zep Sta-A-Way Insect Repellent Towels (1415)  
Zep Sunscreen Towels (1421)

\* **GreenLink™** is a trademark of Zep Inc. and not a third party certification. GreenLink™ identifies those products meeting Zep's own standards for environmentally preferable products that, among other product-specific criteria, do not contain chlorine bleach, ammonia, ozone depleting ingredients, carcinogens, "butyl" solvent, chlorinated solvents, APE's (Alkylphenol Ethoxylates), reproductive toxins, heavy metals, and phthalates. For more information please visit [www.zep.com](http://www.zep.com).