**eOx® Heavy Duty Cleaner**
Made in the USA

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**Technical Data Sheet**

**Description**
eOx Heavy Duty Cleaner (HDC) is an environmentally friendly specialty-cleaning product designed to remove asphalt, carbon deposits, crude oil, resins and many other types of oils and greases. It is a water based blend of vegetable emulsifiers, surfactants and sequestering agents with a light citrus smell. eOx HDC is a universal cleaner for heavy degreasing and contamination problems. eOx HDC has a double action cleaning system:

1. Softens and dissolves carbon deposits
2. Emulsifies dissolved oil and disperses or removes it by rinsing well with clean water.
   The resulting emulsion is stable yet can be precipitated out or separated to further reduce waste disposal.

**Advantages**
- Non-toxic
- Non-flammable
- Non-hazardous - Not subject to dangerous goods regulations
- No phosphates, acids or silicones
- High biodegradability (tested by the University of Ghent, Belgium)
- Does not emulsify, resulting in excellent oil and water separation
- Fresh smell
- Safe to use on all metals, plastics, lacquer paints, floors, walls, ceilings, etc

**Application**
eOx HDC is a highly effective agent for cleaning storage tanks, tank walls, tank truck, heat exchangers, pipelines, floors, equipment, vehicles, and machinery. Cleaning applications include hydrocarbon residues, roofing tar, crude oils, asphalt, tar-like deposits, oils and grease.

**Directions for use**
Depending upon the type and thickness of the contamination, the general cleaning time will be between 10-60 minutes. The selected temperature of the water may range up to 140°F (60°C). The removal of heavy hydrocarbon residues may require between 10-20 hours. After cleaning, simply rinsed with water. Due to the exceptional cleaning capability of eOx HDC using circulation cleaning, more than one cleaning batch can be simultaneously processed. HDC can be safely used on most metals and structural materials. Some examples are below:

**Method:** Immersion system

**Dilution:** Full strength or 1:1 with water

1. Place item to be cleaned in immersion system containing eOx HDC.
2. Allow to soak. Soaking time will depend on type and thickness of the contamination but may range from 10-60 minutes.
3. Agitation may reduce soaking time, as may heating the eOx HDC to 60°C maximum.
4. Rinse with clean water.
5. Dry.
6. Repeat if necessary.
**Method:** Ultrasonic Cleaning Machine  
**Dilution:** Full strength or 1:1 with water  
1. Fill ultrasonic machine with eOx HDC  
2. Contact time will depend on type and thickness of the contamination but may range from 1 - 5 minutes.  
3. Rinse with clean water.  
4. Repeat if necessary.  
5. Dry

**Method:** Manual Application & Low Pressure Cleaning  
**Dilution:** Full strength or 1:1 with water  
1. Spray eOx HDC on surface to be cleaned  
2. Scrub surface with brush  
3. Rinse with clean water.  
4. Repeat if necessary.  
5. Dry

**Method:** High Pressure Cleaning  
**Dilution:** 1:50 to 1:100 with water  
1. Dilute HDC or adjust sprayer pickup depending on the level of contamination.  
2. Spray eOx HDC on surface to be cleaned  
3. Rinse with clean water.  
4. Repeat if necessary.  
5. Dry

**Package Sizes**  
1-gallon poly bottles  
4 x 1-gallon cases  
55-gallon poly drums

**Shelf Life**  
4-years

**Storage**  
Do not store under 35°F/2C and not above 122°F/50C. Do not use below 35°F/2C.

**Properties**  
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>NFPA Hazard Class</td>
<td>Health 1</td>
</tr>
<tr>
<td></td>
<td>Flammability 2</td>
</tr>
<tr>
<td></td>
<td>Reactivity 0</td>
</tr>
<tr>
<td>VOC</td>
<td>285 g/L</td>
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<tr>
<td>pH</td>
<td>9</td>
</tr>
<tr>
<td>Flash point</td>
<td>&lt;158°F / 70C</td>
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