



SPECIALTY ENVIRONMENTAL CHEMICALS AND EQUIPMENT

BIO-SCRUB X

DESCRIPTION:

Highly biodegradable oil-based vapor scrubbing solution. Designed to absorb hydrocarbons such as benzene, toluene, xylene, aromatics, etc. in wet scrubbers or bubble-up type units. Contains no surfactants or perfumes. Contains methyl esters. High flash point. Non-toxic formula. Not for use in cold temperatures. Non-Foaming formula. Incompatible with rubber or like materials and gaskets.

PRODUCT USES & APPLICATIONS

- Vapor Scrubber Systems
- Bubble-Up Systems
- Hydrocarbon Stripping

APPLICATION INSTRUCTIONS

| | |
|----------------------|----------------------------------|
| Dilution Rate | Does not dilute with water |
| Application Methods | For use in scrubber systems only |
| Special Instructions | None |

Scrubbing Instructions: Add BIO-SCRUB X to reservoir and DO NOT dilute with water. Make sure there are no pumps seals which are made from rubber as this product will cause them to swell and fail.

HAZARDOUS INFORMATION

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|-------------------|------------------------------|
| Specific Hazard | Eye and skin irritant |
| Flash Point (°F) | Above 220° |
| Biodegradability | Excellent |
| pH | N/A for oils |
| Unusual Hazards | Incompatible with rubber |
| Other Information | Highly biodegradable formula |

PACKAGING INFORMATION

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|----------------------|-------------------------------|
| Available Quantities | 5, 30, 55 and bulk quantities |
| Packaging Material | Poly |
| Other Information | Product will freeze at 32°F. |

CASE STUDY 7 APPLICATION INFO:

November 12, 2007 Chemical Facility Lake Charles, LA

BIO-SCRUB X was used in a packed column scrubber system that was removing EDC (ethylene dichloride). The customer stated that the scrubber unit with BIO-SCRUB X was removing 70% of the EDC prior to carbon. Previously they were using Carbonil and getting 60% removal of EDC but had issues with foaming.

September 14, 2009 Hitchcock, TX

During testing of BIO-SCRUB X we found that we could absorb 98% of VOC's coming from Vapor Tech's ELIMINATOR Vapor Scrubber Unit. The ELIMINATOR Scrubber System is a brand new, cutting edge liquid absorber which will enable extremely high removal of VOC's without the use of carbon (we always recommend carbon as a safety net). Using gasoline vapors as a base, we had 800 ppm at the inlet of the scrubber (VOC Meter). On the outlet of the scrubber unit we had a reading of 12 ppm. This is a removal of over 98%.