

# Emerald™ HD 2

Emerald HD 2 is a clear, heavy duty, mildly alkaline, low foam, general-purpose maintenance cleaner intended for industrial and institutional cleaning tasks. The product is water soluble, non-flammable and free of petroleum and chlorinated solvents, caustics, borates, and phosphates. Emerald HD 2 is formulated with a biodegradable surfactant system derived from sustainable resources offering superior wetting, emulsification, and dispersion. Because of its unique formulation, Emerald HD 2 will clean a variety of oils, fats, and particulate soils.

Emerald HD 2 has been recognized by the US Environmental Protection Agency's (EPA) Design for the Environment Program (DfE) as offering improved health and environmental characteristics.

## Features & Benefits

Wetting agents are derived from sustainable sources and are biodegradable	Recognized by US EPA/DfE for improved health, safety & environmental qualities
High detergency	Good particulate soil removal characteristics
Contains no chelating agents	Emulsifies most oils

## Typical Applications

- Floor cleaning in manufacturing plants
- Machinery cleaning; stamping, drawing, milling, etc.
- Glass cleaning
- General maintenance cleaning
- Transportation cleaning
- Steam cleaning

## Operating Conditions

### How and where to use

Emerald HD 2 may be used as a spray on, wipe or brush-on cleaner, or as a soak cleaner. It is not recommended for use in helical spray or turbo washers, as foam levels may be



**Cleaning**  
the Hard to Clean



**Finishing**  
the Hard to Finish



**Treating**  
the Hard to Treat

excessive. Emerald IC P 1 should be considered when a lower foaming product is required for use in these industrial parts cleaning applications.

Floor cleaning in floor scrubbing machines dilute 1-part Emerald HD 2 with 15 to 20 parts water.

Light soils on painted surfaces, dilute 1-part Emerald HD 2 with 10 to 19 parts water, spray or wipe on then rinse or wipe off with clean cloth. For heavier dirt, dilute 1 part to 5 parts of water.

Machinery cleaning dilute 1-part Emerald HD 2 with 1 to 4 parts for light oil and soils, spray or wipe on then rinse or wipe off with a clean cloth. For heavy oil and soil removal, dilute 1 to 1.

Soak tank cleaning of clean metal parts, tools, filters, etc. use at 10% to 20% by volume. Heating solution (up to 180°F) will speed cleaning. Most metals are not harmed when using the dilutions recommended above. Emerald HD 2 is not recommended for use on aluminum substrates at elevated temperatures.

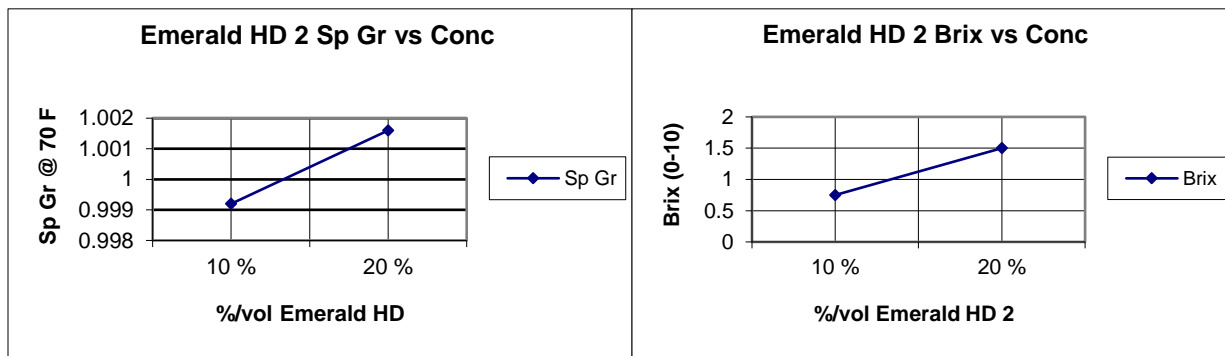
Steam cleaning dilute 1-part Emerald HD 2 with 50 to 99 parts water.

Glass cleaning use at 0.5 to 1.0 % by volume (1 to 2 fluid ounces per gallon).

Transportation cleaning, for heavy soils dilute one-part Emerald HD 2 with 20 parts water. For light soils dilute one part with 30 to 50 parts water.

Burnishing / Mass Finishing use at 2 to 4% by volume in water.

Emerald HD is a heavy duty alkaline cleaner. Most surfaces can be safely cleaned with when used as directed. Rinsing or wiping off should be done as quickly as possible. When using on painted surfaces it is always advisable to keep contact times to a minimum.



## Waste Disposal

Used solutions and rinse waters should be discharged to a permitted wastewater treatment system in accordance with all applicable local, state and federal environmental regulations.

## Caution

Emerald HD 2 is a mildly alkaline material so always wear goggles, rubber gloves and protective clothing when working with the product. It is important to read and understand the material safety data sheet prior to working with Emerald HD 2.

WARRANTY: THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

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## Our people. Your problem solvers.

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