



EcoGreen Technical Data Sheet

Product Summary:

Our innovative, flagship product EcoGreen is setting a new performance standard with an enviable environmental pedigree. The base, non-ionic surfactants are water based and have relatively low toxicity. All the active ingredients are listed as CleanGredients^{®1} and are readily biodegradable and considered non-VOC². EcoGreen is additionally listed on the USEPA NCP product schedule as a Surface Washing Agent (SW #74)³



These primary, specialty nonionic surfactants are a new generation of high-performance, readily biodegradable chemistries that provide performance similar to APE's (NPE & OPE) achieving maximum performance to alternative products in cleaning and treating heavily oiled substrates and soils. In hard surface cleaning and degreasing applications, the performance of these surfactants is outstanding and comparable to that of APE's, and significantly better than PAE surfactants in many applications. They are a superior choice where excellent wetting and solubilization performance is required.

They are a proven line of readily biodegradable, nonionic surfactants with low aquatic toxicity. They readily biodegrade (> 60 percent biodegradation within 28 days per OECD 301F) and have an aquatic toxicity of EC₅₀ > 10 mg/L. Their rapid and complete biodegradation is expected in soil and surface waters, and during wastewater treatment.

These surfactants develop minimal foam during application and provide very rapid foam collapse. Low foam can improve rinsibility and reduce or eliminate the need for foam control agents. Additionally, these surfactants possess a very low odor profile compared to PAE's resulting from significantly less unreacted alcohol.

Typical Applications and Uses:

Hazmat emergency response and spill cleanup	Surface washing
Hard surface cleaning and decontamination	Insitu free product recovery enhancement
Tank and equipment cleaning	Degassing of tanks and vessels
Parts-washing	VOC vapor mitigation and odor control
Soil remediation	Tank bed remediation
Suppressing vapor emissions from contaminated, stockpiled soils	Chemical pipeline pigging
Soil flushing and recovery	Fire fighting for class A & B fires



Mixing Procedures:

EcoGreen is delivered as a concentrate and must be diluted with water to work properly. Active solutions can be formulated by premixing or eduction. EcoGreen is 100% soluble in water. It is recommended that when preparing a solution, you first add the water into the mixing container and then follow by adding the proper amount of EcoGreen. Depending upon the application, EcoGreen is applied between a 1% and 6% active solution.

Physical Properties:

Product Name:	EcoGreen
Physical Form:	Liquid
Color:	Green
Specific Gravity:	1.015
Solubility in Water:	100%
pH:	8.3 +/- 0.5
Viscosity:	4.403 cSt / 4.47 cPs



CLEANGREDIENTS®

¹ CleanGredients® Listing - CleanGredients® is a database of chemical ingredients used primarily to formulate residential, institutional, industrial, and janitorial cleaning products that have been pre-approved to meet the U.S. EPA's Safer Choice Standard. CleanGredients® represents a community of practice that brings together industry, government and non-profit stakeholders who have a vested interest in advancing the use of green chemistry in products.

² Not VOC - Consumer Products US EPA LVP Exemption - Demonstrates a vapor pressure less than 0.1 mm Hg at 20° C – from 140 CFR Chapter 1 Subpart C. National Volatile Organic Compound Emission Standards for Consumer Products, 59.203 from 63 FR 48831, Sept 11, 1998

³ EcoGreen is on the U.S. Environmental Protection Agency's (USEPA) NCP Product Schedule. This listing does not mean that the EPA approves, recommends, licenses, certifies, or authorizes the use of EcoGreen on an oil discharge. The listing means only that data have been submitted to EPA as required by subpart J of the National Contingency Plan, 40 CFR Section 300.915. Technical and application information on EcoGreen can be found in the relevant section of the current USEPA's NCP Product Schedule on the USEPA website.

Complete information on health hazards, PPE, handling procedures, environmental hazards and disposal is listed in the current EcoGreen Safety Data Sheet (SDS) for this product.