

Hand Sanitizers

Professional & Household

Standards: GS-41 Edition 2.3 and GS-44 Edition 4.2



WHAT CERTIFICATION MEANS

Green Seal's leadership standard means an alcohol-based hand sanitizer product is verified as safer for human health and the environment than similar products while providing uncompromising hand hygiene performance.

PERFORMANCE OF GREEN



All Green Seal certified products must demonstrate a high level of cleaning performance through objective, scientifically validated methods conducted under controlled and reproducible laboratory conditions. Green Seal certified hand sanitizers are verified for performance based on in-vitro testing for antimicrobial activity using a time kill procedure. Acceptable methods for in vitro testing include ASTM E2783 and ASTM E2315.

Green Seal certified hand sanitizers are verified for meeting USP purity levels, inclusion of a denaturant, and are performance tested according to US FDA's current Good Manufacturing Practices (cGMPs).

SCIENCE OF GREEN – HEALTH



RESTRICTIONS TO PREVENT ADVERSE HEALTH EFFECTS	
Acute Toxicity (Oral)	LD50 > 5,000 mg/kg
Acute Toxicity (Inhalation)	LC50 > 20 mg/L at 1 hour
Carcinogens	Must be free of, above 100 ppm.
Reproductive Toxins	Must be free of, above 100 ppm.
Mutagens	Must be free of, above 100 ppm.
Skin and Eye Damage	Must not cause skin corrosion or serious eye damage. Must have pH of > 2.0 but less than 11.5
Skin Sensitization	Must not cause allergic response following skin contact, according to OECD LLNA testing.
Skin Irritation	Must not cause skin irritation, as defined by GHS (Categories 2 or 3)
Endocrine Disruptors	Must be free of above 100 ppm, as defined by EPA Tier 1 Screening.
Asthmagens	Must be free of above 100 ppm. Exemption: triethanolamine (TEA) is allowed for gel products.
2-butoxyethanol	Must be free of, above 100 ppm.
Alkylphenol Ethoxylates	Must be free of, above 100 ppm.
Bisphenol A	Must be free of above 100 ppm, and must not be intentionally introduced to primary packaging
Chlorinated Materials	Must not be intentionally introduced to primary packaging
Colorants	Must be FDA-approved for ingestion, or a natural, or free of heavy metals
Ethoxylated Chemicals	Must be free of above 100 ppm.
Formaldehyde Donors	Must be free of above 100 ppm.
Halogenated Organic Solvents	Must be free of above 100 ppm.
Hexavalent Chromium	Must be free of above 100 ppm and must not be intentionally introduced to primary packaging.
Lead	Must be free of above 100 ppm and must not be intentionally introduced to primary packaging.
Mercury	Must be free of above 100 ppm and not be intentionally introduced to primary packaging
Nitrilotriacetic Acid	Must be free of at the ingredient level
Nitro-Musks and Polycyclic Musks	Must be free of at the ingredient level
Parabens	Must be free of at the ingredient level
PFAS	Must be free of above 100 ppm.
Phthalates	Must be free of at the ingredient level and not be intentionally introduced to primary packaging
Selenium	Must be free of at the ingredient level

Green Seal® is a global non-profit whose certification mark is a universal symbol that a product or service meets the highest benchmark of health and environmental leadership.

Learn more about our environmental leadership standards and 30,000+ certified products and services at [GreenSeal.org](https://www.GreenSeal.org).

SCIENCE OF GREEN – ENVIRONMENT



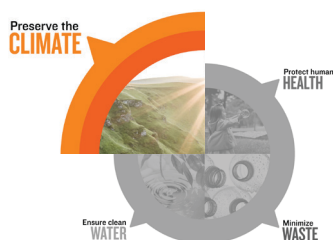
RESTRICTIONS TO PREVENT PACKAGING WASTE

Plastic	Must be either source-reduced, recyclable, contain at least 25% post-consumer material or a refillable package with an effective take-back program
Non-Plastic	Must be either recyclable or contain at least 25% post-consumer material
Aerosol Cans	Packaging is prohibited
Recycling Labeling	Plastic packages must be marked with appropriate Resin Identification Code



RESTRICTIONS TO PREVENT ADVERSE ENVIRONMENTAL EFFECTS

Acute Toxicity to Aquatic Life	Must have LC50 > 100 mg/L, at rinse-off dilution level
Aquatic Biodegradability	Organic compounds must exhibit biodegradability if greater than 100 ppm after rinse-off dilution
Bioaccumulation	Must be free of ingredients that bioaccumulate, at rinse-off dilution level
Eutrophication	The product shall not contain phosphorus at more than 0.2% by weight



CRITERIA THAT HELP PRESERVE THE CLIMATE

Several of the criteria for protecting human health, minimizing waste and ensuring clean water also help preserve the climate:

- Free of lead and other heavy metals
- Free of mercury
- Must have source-reduced packaging or recyclable and 25% post-consumer packaging

A GREEN YOU CAN TRUST

All Green Seal certified products must meet industry best practices for Quality and Safety.



Combustibility



Fragrances



Animal Testing



cGMP Verification

Our standards are referenced by the leading green building certification programs.

