



Natural



**Botanical Antimicrobial
Surface Protection**

LIFE NATURAL – PROTECTS POLYMERS SUSTAINABLY

Life Natural is a family of botanical-based antimicrobial technologies utilizing peppermint oil as the active ingredient. Highly effective against bacteria, Life Natural can be incorporated into a wide range of coating chemistries and plastic materials.

✓ **FOR COATINGS**

✓ **FOR PLASTICS**

**SWISS
TECH
INSIDE**

Outstanding qualities

- Antimicrobial active ingredient is natural peppermint oil
- Gives your product lifetime protection against bacteria that can cause material degradation
- Eliminates odor-causing bacteria
- Effective against a wide range of bacteria in JIS Z 2801, ISO 22196 and JIS 1902 efficacy testing

Added value

- Continuous antimicrobial product protection
- Compatible with a broad range of plastics, coating chemistries and footwear materials
- Renewable, botanical active ingredient

Regulatory Compliance

- The active ingredient in Life Natural peppermint oil, is listed on Annex 1 of EU BPR 528/2012 and is listed as a minimum risk pesticide on Section 25b of the US FIFRA regulation*

WHAT DOES IT DO?

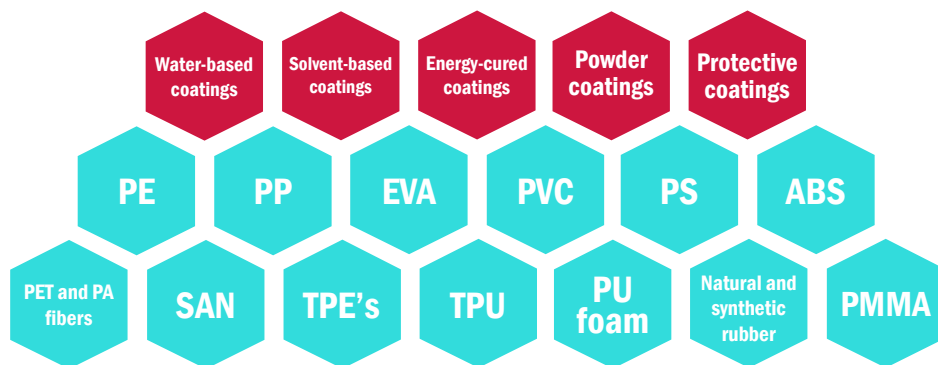
Life Natural botanical antimicrobial additives prevent the deterioration of coatings and polymers by inhibiting the growth of microorganisms on surfaces. The active ingredient is peppermint oil, which demonstrates broad-spectrum excellent efficacy against bacteria, and can be used in a wide range of polymers, including transparent grade polymers.

WHAT IS IT FOR?

Life Natural antimicrobial additives are ideal for plastics to keep materials and surfaces protected against the growth of microorganisms. Life Natural keeps footwear odor-free, including fabric linings (cotton, cellulosic or polyester), foam insoles, leather and PVC uppers.

* Please see your HeiQ technical representative for more information.

LIFE NATURAL APPLICATIONS OVERVIEW



PERFORMANCE THAT MEETS THE HIGHEST STANDARDS

JIS Z 2801:2000

Antimicrobial Products – Test for antimicrobial activity and efficacy

Our performance: 99.9% reduction of Gram negative and Gram positive bacterial reduction after 24 hours contact time to bacteria

ISO 22196

Plastics – Measurement of antibacterial activity on plastics surfaces

Our performance: 99.9% reduction of Gram negative and Gram positive bacterial reduction after 24 hours contact time to bacteria

JIS 1902

Textiles-Determination of antibacterial activity and efficacy of textile products.

Our performance: 99.9% reduction of Gram negative and Gram positive bacterial reduction after 24 hours dwell time to bacteria

AATCC 100-2019

Test method for antibacterial finishes on textile materials.

Our performance: 99.9% reduction of Gram negative and Gram positive bacterial reduction after 24 hours dwell time to bacteria

ASTM E-2149

Determining the antimicrobial activity of immobilized antimicrobial agents under dynamic contact conditions

Our performance: 99.9% reduction of Gram negative and Gram positive bacterial reduction after 24 hours dwell time to bacteria



Get inspired and learn more about our innovative technologies
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Differentiate. Innovate.

For more details and references please ask for our HeiQ Life Technical presentation