

GERMINATOR

AIR SANITISATION TREATMENT FOR YOUR CAR



GERMINATOR ANTIMICROBIAL PRODUCT INFORMATION AND GLOBAL USAGE

EXCELLENT ORGANIC SOLUBILITY FOR DISINFECTANT APPLICATIONS

GERMINATOR Antimicrobial is readily soluble in most organic solvents and oils, and is soluble in water. Usually, it is added to formulation concentrates which are subsequently diluted with water during use.

This product is uniquely effective against a wide variety of organisms, including *Pseudomonas spp* and *Mycobacterium tuberculosis*. Typically, GERMINATOR Antimicrobial is combined with other substituted phenolics in the manufacture of disinfectant formulations used in homes, schools, hospitals and nursing homes. Germinator Antimicrobial formula is also used in the manufacture of formulations used for the post-harvest treatment of pears and citrus fruits.

STANDARDS AND REQUIREMENTS

GERMINATOR Antimicrobial, when used according to good manufacturing practices, meets No. 464-70 the requirements of the F.D.A. for use in defoaming agents (21CFR 176.210), adhesives (21CFR 175.105), and rubber articles (21CFR 177.2600).

APPROVED USAGE

Canada

Approved uses: reformulation, fabric, food/feed/seed, leather, paints, hard surface disinfectant, sanitizer, air sanitizer and laundry additive. PCP Registration #11980.00. DSL

Europe

France: Used in cleaning formulation (maximum concentration 0.3 wt. %) for the cleaning of materials for food contact. Arrêté du 8 septembre 1999.

Germany: Active ingredient listed under BgVV recommendation XIV "Plastic Dispersions" with a limit of 0.3%.

South America

Argentina: Registration in progress for use in agricultural applications. GERMINATOR is already registered for disinfection hospital grade use.

PHYSICAL PROPERTIES

These are laboratory or literature data typical of the product and are not to be considered as, or confused with, specifications.

Formula	$C_6H_4(C_6H_5)OH$
Molecular weight	170.2
Freezing Point, °C	57
Boiling Point, °C	286
Flash Point, C.O.C	124°C/255° F
Fire Point, C.O.C	149°C/300° F
Specific Gravity, 25/25°C	1.2
Bulk Density, lb/ft ³	35-41
Vapor Pressure, mm Hg	
20°C	0.0017
50°C	0.0326
100°C	1.13

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ANTIFUNGAL TESTING

Test Organism % for Inhibition and FUNGI

Antibacterial *Rhizopus nigricans* 0.015 - 0.02
Efficacies *Rhizoctonia solani* 0.001 - 0.002
Chaetomium globosum (ATCC #6205) 0.0025 - 0.005
Hormiscus gelatinosum 0.005 - 0.01
Aspergillus niger 0.025 - 0.05
Polyporus tulipiferae (F.P.L. No. 517, ATCC #11245) 0.005 - 0.01
Aspergillus flavus (ATCC #9643) 0.005 - 0.01
Lenzites trabea (ATCC #11539) 0.0025 - 0.005
Ceratostomella pilifera 0.005 - 0.01
Trichophyton interdigitale 0.002 - 0.0035
Trichophyton rosaceum 0.0035 - 0.005

BACTERIA

Staphylococcus aureus (ATCC #6538) 0.01 - 0.015
Bacillus subtilis (ATCC #8473) 0.01 - 0.015
Enterobacter aerogenes (ATCC #13048) 0.01 - 0.015
Klebsiella pneumoniae (ATCC #8308) 0.01 - 0.015
Pseudomonas aeruginosa (ATCC #10145) 0.02 - 0.025
Pseudomonas aeruginosa (ATCC #15442) 0.045 - 0.05
Proteus vulgaris (ATCC #881) 0.005 - 0.01
Escherichia coli (ATCC #11229) 0.01 - 0.015
Salmonella choleraesuis (ATCC #10708) 0.01 - 0.015

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INDUSTRY APPLICATIONS

Automotive, Hospital, Schools and Nursing Homes

Multiple disinfectant usage for air systems, air sanitisation and all types of surfaces

Industry Reason for Addition Suggested Concentration Application Method

Disinfectants Usage of the active ingredient will vary depending upon the add to the organic portion of the formulation. The disinfectant concentrate of a minimum of 0.1% phenolic component after dilution is effective against a wide variety of pathogenic organisms.

Post-Harvest To prevent spoilage of harvest, applied from formulations by dipping.

Preservative of stored fruits. Application method & wash or spray.

Pears & Citrus Fruits Applied with the desired amount from a wax formulation.

GERMINATOR TEST RESULTS

Skin Irritation Human - No skin irritation produced by a 5% sesame oil solution of the material.

Skin Sensitization Human - Not a skin sensitizer, the formula does not cause chemical hypersensitivity.

Skin Absorption Not absorbed through the skin in toxic amounts.

Biodegradability Uniformly ¹⁴C-labeled o-phenylphenol (OPP), labeled on the phenol ring, was tested by OECD Method 301B. The rate and extent of mineralization of [¹⁴C]OPP to ¹⁴CO₂, indicative of rapid biodegradation of the phenolic ring, was consistent with a classification of "Ready Biodegradability."