

ZYNPAK PACKAGING PRODUCTS INC.

245 Drumlin Circle, Concord, Ontario, L4K 3E4 416-665-8143, 866-996-7251 Fax: 905-660-3008, 800-915-0215

HELP STOP THE SPREAD

OF THE CORONAVIRUS WITH

VIRUCIDAL

- BACTERICIDAL
- **PSEUDOMONOCIDAL**



Ready-to-use, All-in-one, Disinfectant, Deodorizer, and All Purpose Cleaner

Germosolve 5 is a new quaternary ammonium formulation that can disinfect in as little as 5 seconds. Effective against H1N1, Influenza A, Staph, Coronavirus, Norovirus, HIV, Rhinovirus, Canine Parvovirus, HBV, HCV and more.

Intended Areas

Office s /workplaces, factories, schools, daycare centres, hospitals, walk-in clinics, dental/doctor's offices, ambulances, fitness centres, restaurants, kitchens, food services, bathrooms, kennels, retirement homes, nursing homes, retail stores, shopping malls, salons, public transit, airports, automobile detailing, bank services, theatres, sports arenas, cruise ships, camp sites, shopping carts, grocery stores, pharmacies, hotels, laundromats and all high traffic areas.

Application

For use on surfaces such as granite, marble, hardwood and laminate floors, countertops, walls, porcelain tiles, leather, acrylic, sealed fiberglass, vinyl, gym equipment, toilet s /plumbing fixtures and office furniture. Rinse-free on non food-contact surfaces.





	Code	Product	Fragrance	Size	QTY/CS
100	20016003	Germosolve 5	Lavender	946 mL	. 12
	20016005	Germosolve 5	Lavender	3.78 L	4
	20016004	Germosolve 5 Natural	Fragrance Free	946 mL	. 12
ı	20016006	Germosolve 5 Natural	Fragrance Free	3.78 L	4

Health Canada Approved • Non-Flammable • Does NOT Require Dangerous Goods Transportation



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GERMOSOLVE-5 DISINFECTANT CLEANER DEODORIZER DIN 02425807

DISINFECTION DATA:

Results:		No. of Carriers	
Test Organism	Sample	Exposed	Positive
Pseudomonas aeruginosa	Α	60	0
(ATCC 15442)	В	60	0
	C	60	0
Salmonella enterica	A	60	0
(ATCC 10708)	В	60	0
	C	60	0
Staphylococcus aureus	A	60	0
(ATCC 6538)	В	60	1
	С	60	0
Extended Spectrum Beta-Lactamase (ESBL) Escherichia	Α	10	0
coli (ATCC BAA-196)	В	10	0
Klebsiella pneumoniae New Delhi Metallo-Beta Lactamasc	A	10	0
(NDM-1) Carbapenem Resistant (CDC Clinical Isolate)	В	10	0
Methicillin Resistant Staphylococcus aureus (MRSA)	A	10	0
(ATCC 33591)	В	10	0
Multi-Drug Resistant (MDR) Acinetobacter baumanii	Α	10	0
Ceftazidime and Gentamicin resistant (ATCC BAA-1605)	В	10	0
Vancomycin resistant Enterococcus faecium (VRE)	A	10	0
(ATCC 51559)	В	10	0

Test Method: OAC Germicidal Spray Products as Disinfectants

Test Condition: Ready-To-Use (RTU), 2 minute contact time, 5% organic soil load, room temperature, glass slide carrier substrates

Conclusion: Under the conditions of these investigations, SC-RTU Disinfectant Cleaner demonstrated disinfectant activity against *Pseudomonas aeruginosa*, *Salmonella enterica*, *Staphylococcus aureus*, Extended Spectrum Beta-Lactamase (ESBL) *Escherichia coli*, *K/ebsiel/a pneumoniae* New Delhi Metallo-Beta Lactamase (NDM-1) Carbapenem resistant, Methicillin Resistant *Staphylococcus aureus* (MRSA), Multi-Drug Resistant (MDR) *Acinetobacter baumanii* Ceftazidime and Gentamicin resistant and Vancomycin resistant *Enterococcus faecium* (VRE) according to criteria established by the U. S. Protection Agency for registration and labeling of a limited disinfectant product as a bactericide.



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DISINFECTION DATA:

Test Organism	Contact Time	Sample	Titer Reduction
*Avian Influenza Virus (H5N1) NIBRG-14	30 seconds	A	≥3.00 log ₁₀
(Charles River Laboratories)		В	$\geq 3.00 \log_{10}$
‡Bovine Viral Diarrhea Virus (BVDV)	1 minute	A	≥5.00 log 10
(American BioResearch Laboratories)		В	≥5.00 log 10
*Canine Parvovirus Type 2b	2 minutes	A	≥3.65 log 10
(American BioResearch Laboratories)		В	\geq 3.65 log 10
†Duck Hepatitis B Virus (DHBV)	1 minute	A	≥3.39 log 10
(LeGath strain) (HepadnaVirus Testing)		В	≥3.39 log 10
*Feline Calicivirus (FCV)	2 minutes	A	≥6.40 log ₁₀
(University of Ottawa)		В	≥6.40 log ₁₀
†Hepatitis B Virus (HBV) (LeGath strain)	1 minute	A	≥3.39 log 10
(HepadnaVirus Testing)		В	\geq 3.39 log 10
‡Hepatitis C Virus (HCV)	1 minute	A	≥5.00 log ₁₀
(American BioResearch Laboratories)		В	\geq 5.00 log ₁₀
*Human Immunodeficiency Virus Type 1	30 seconds	A	≥3.38 log 10
(HIV-1) (Zeptometrix)		В	\geq 3.38 log 10
*Human Rotavirus (ATCC VR-2018)	1 minute	A	≥3.50 log 10
		В	\geq 3.50 log 10
*Norovirus (Norwalk Virus)	2 minutes	A	≥6.40 log 10
(University of Ottawa)		В	≥6.40 log ₁₀
Pandemic 2009 H1N1 Influenza A Virus		(Refer to Note	
*Poliovirus Type 1	5 minutes	A	≥3.67 log 10
(ATCC VR-1562)		В	$\geq 3.67 \log_{10}$
		C	\geq 3.67 log ₁₀
*Rhinovirus Type 14	2 minutes	A	≥3.65 log 10
(ATCC VR-284)		В	\geq 3.65 log 10
*Rhinovirus Type 39 (ATCC VR-340)	2 minutes	A	≥4.50 log 10
		В	\geq 4.50 log ₁₀



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Test Method:

*U.S. E.P.A. Pesticide Assessment Guidelines, Subdivision G: Product Performance, 1982, Section 91-30 (d) (5), "Disinfectants – Efficacy against Viruses", pp. 72-76.

tProtocols for Testing the Efficacy of Disinfectants against Hepatitis B Virus (HBV) (EPA, Federal Register, Vol. 65, No. 166, 8/25/2000, p. 51828).

j:Protocol for Testing Disinfectants against Hepatitis C Virus using Bovine Viral Diarrhea Virus as approved by the U.S. EPA on August 15, 2002.

Test Conditions: Ready-To-Use {RTU}, 5% organic soil load, room temperature, glass petri dish substrates, contact time (see above)

Conclusion:

Under the conditions of this investigation, SC-RTU Disinfectant Cleaner was virucidal against Avian Influenza Virus {H5Nl}, Bovine Viral Diarrhea Virus (BVDV), Canine Parvovirus, Duck Hepatitis B Virus, Feline Calicivirus (FCV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Human Immunodeficiency Virus Type I (HIV-I), Human Rotovirus, Norovirus (Norwalk Virus), Pandemic 2009 H 1N1 Influenza A Virus, Poliovirus Type 1, Rhinovirus Type 14 and Rhinovirus Type 39 according to criteria established by the U. S. Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.

NOTE:

Per the EPA guidance document dated October 21, 2009, disinfectant products that bear label claims against human, avian, or swine influenza A virus, and have submitted and received approval of efficacy data to support these label claims, may include a label claim against the Pandemic 2009 HINI Influenza A Virus.



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NON-FOOD CONTACT SANITIZATION DATA:

Test Organism	Contact Time	<u>Sample</u>	% Kill
Staphylococcus aureus	5 seconds	Α	>99.9
(ATCC 6538)		В	99.9
		C	>99.9
Klebsiella pneumoniae	5 seconds	Α	>99.9
(ATCC 4352)		В	>99.9
		С	>99.9

Test Method:

Sanitizer Test for Inanimate Non-Food Contact Surfaces (EPA DIS!fSS-10, 07 Jan 82)

Test Conditions:

Ready-To-Use (RTU), 5% organic soil load, room temperature contact time (see below)

Conclusion:

Under the conditions of these investigations, SC-RTU Disinfectant Cleaner demonstrated sanitizing activity against Staphylococcus aureus and Klebsiel/a pneumonia according to criteria established by the U. S. Environmental Protection Agency for registration and labeling of a disinfectant product as a sanitizer.

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GERMOSOLVE 5 RTU

SECTION 1. IDENTIFICATION

Product Identifier GERMOSOLVE 5 RTU

Other Means of 1946WIPR1

Identification

Recommended Use

All purpose neutral cleaner.

Manufacturer Lawrason's, Inc, 460 Wyecroft Road, Oakville, Ontario, L6K 2G7, (905) 842-8300,

www.Lawrasons.com

Supplier Identifier Lawrason's, Inc, 460 Wyecroft Road, Oakville, Ontario, L6K 2G7, (905) 842-8300,

www.Lawrasons.com

Emergency Phone No. CANUTEC, 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666 on a cellular phone

SDS No. 32350, 32351 **Date of Preparation** February 01, 2017

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A

Label Elements



Warning

Hazard Statement(s):

Harmful if swallowed, in contact with skin or if inhaled.

Causes serious eye irritation.

Causes skin irritation.

Precautionary Statement(s):

Wash hands and skin thoroughly after handling. Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid breathing mist.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Product Identifier: GERMOSOLVE 5 RTU - Ver. 1

Date of Preparation: February 01, 2017

Date of Last Revision: June 01, 2018 Page 01 of 06

Continue rinsing.

If skin irritation occurs: Get medical advice or attention. If eye irritation persists: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations. Storage:

Store in a well-ventilated place. Keep cool.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Tetrasodium ethylenediaminetetraacetate	64-02-8	3.00-7.00		
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	0.50-1.50		

Notes

The exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

Skin Contact

Wash with plenty of water. If skin irritation or a rash occurs, get medical advice or attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Get medical advice or attention if you feel unwell or are concerned. Call a Poison Centre or doctor if you feel unwell.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Does not burn.

Not known to generate any hazardous decomposition products in a fire.

Product Identifier: GERMOSOLVE 5 RTU - Ver. 1

Date of Preparation: February 01, 2017

Date of Last Revision: June 01, 2018 Page 02 of 06

Special Protective Equipment and Precautions for Fire-fighters

No special precautions are necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

No special precautions are necessary.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

Large spills or leaks: stop or reduce leak if safe to do so. Dike spilled product to prevent runoff. Dike and recover contaminated water for appropriate disposal. Contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not get in eyes, on skin or on clothing. Do not swallow.

Conditions for Safe Storage

Store in an area that is: cool, ventilated. Store in the original, labelled, shipping container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	Not established		Not established		Not established	
Tetrasodium ethylenediaminetetraacetate	2 mg/m3		Not established		Not established	

Individual Protection Measures

Skin Protection

Wash hands and face thoroughly after handling and before eating, drinking, smoking or using the toilet.

Respiratory Protection

Not normally required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance Violet liquid.

Odour Lavender

Odour Threshold Not available
pH 10.00 - 11.00

Melting Point/Freezing Point Not available (melting); Not available (freezing)

Initial Boiling Point/Range >= 100 °C (212 °F)
Flash Point Not available
Evaporation Rate Not available
Flammability (solid, gas) Not available

Product Identifier: GERMOSOLVE 5 RTU - Ver. 1

Date of Preparation: February 01, 2017

Date of Last Revision: June 01, 2018 Page 03 of 06

Upper/Lower Flammability or

Explosive Limit

Not available (upper); Not available (lower)

Vapour Pressure Vapour Density (air = 1)

Not available Not available

Relative Density (water = 1)

1.01

Solubility

Very soluble in water; Not applicable (in other liquids)

Partition Coefficient,

Not available

n-Octanol/Water (Log Kow)

Auto-ignition TemperatureNot availableDecomposition TemperatureNot available

Viscosity

Not applicable (kinematic); Not applicable (dynamic)

Other Information

Physical State

Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Decomposes in the presence of high energy sources (e.g. welding arcs). May cause a fire.

Conditions to Avoid

Freezing.

Incompatible Materials

Not applicable.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	0.054-0.51 mg/L	> 500 mg/kg (rat)	> 2000 mg/kg (rabbit)
Tetrasodium ethylenediaminetetraacetate	Not available	3030 mg/kg (rat)	> 5000 mg/kg (rabbit)

Skin Corrosion/Irritation

May cause very mild irritation based on information for closely related chemicals.

Serious Eye Damage/Irritation

May cause serious eye damage based on information for closely related materials.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Symptoms may include redness, rash, swelling and itching.

Skin Absorption

Symptoms may include redness, rash, swelling and itching.

Ingestion

Causes damage to organs based on information for closely related materials.

Product Identifier: GERMOSOLVE 5 RTU - Ver. 1

Date of Preparation: February 01, 2017

Date of Last Revision: June 01, 2018 Page 04 of 06

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	Not Listed	Not Listed	Not Listed	Not Listed
Tetrasodium ethylenediaminetetraacetate	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Studies were not located.

Persistence and Degradability

Predicted not to degrade rapidly based on quantitative structure-activity relationships.

Bioaccumulative Potential

This product and its degradation products are not expected to bioaccumulate.

Mobility in Soil

Studies are not available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. Store product for disposal as described under Storage in Section 7 of this safety data sheet. Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Environmental

Not applicable

Hazards

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Product Identifier: GERMOSOLVE 5 RTU - Ver. 1

Date of Preparation: February 01, 2017

Date of Last Revision: June 01, 2018 Page 05 of 06

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

This section is not required by WHMIS.

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 1 Flammability - 0 Instability - 0

SDS Prepared By Technical Manager Phone No. 905-842-8300

Date of Preparation February 01, 2017

Date of Last Revision June 01, 2018

Key to Abbreviations IARC = International Agency for Research on Cancer

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational

Health and Safety (CCOHS).

Additional Information All information is based upon our current knowledge and experience of our product and is not

exhaustive. It applies to the product as defined by the specifications. In case of combinations of mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary,

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Product Identifier: GERMOSOLVE 5 RTU - Ver. 1

Date of Preparation: February 01, 2017

Date of Last Revision: June 01, 2018 Page 06 of 06

