

LANXESS
Energizing Chemistry



 **LADLE***add*



PRIYO INTERNATIONAL



LANXESS Switzerland GmbH

Reference: Priyo International



To Whom it may concern,

With this letter, I confirm Priyo International is our Partner and is allow to sell our Preventol™ O Extra product in any country in MENA & ASIA, as well in the USA.

Should you have any question, please do not hesitate to contact me at the details mentioned above.

Yours sincerely,

Angel Lanchas

Angel Lanchas
EMEA Head of Sales, MS Actives
LANXESS Switzerland GmbH

July 28th, 2022

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QUALITY PERFORMS.



Disinfection energized by LANXESS

Powerful active substances for effective disinfection

X Preventol®

QUALITY WORKS.

LANXESS
Energizing Chemistry

LANXESS PREVENTOL® PHENOLIC PRODUCTS FOR EFFECTIVE DISINFECTION

Numerous phenolic derivatives are generated in nature. They can be found in almost every plant – e.g. thymol in thyme, tannin as protection against herbivores or quercetin, a natural antioxidant. Phenolic derivatives protect plants against bacteria and fungi. Therefore, they serve as a natural role model for the industrial use of phenolic derivatives.



Preventol® for heavy-duty surface disinfection

Modern phenolic active substances, such as Preventol® CMK and Preventol® O extra are an excellent choice for surface disinfection in a variety of fields, such as hospitals, doctors' offices, retirement homes, (medical) instruments, hotels, public institutions and industrial surfaces.



Disinfectants based on LANXESS active substances offer decisive advantages: they have broad spectrum efficacy against bacteria, fungi, and enveloped viruses; they are effective against *Mycobacterium tuberculosis*; and they provide reliable disinfection even in the presence of organic matter such as dirt, blood and sputum.

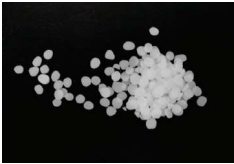

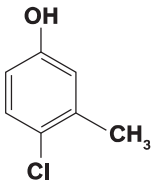
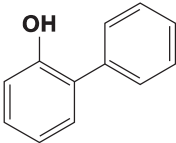
Effective and environmentally sound

LANXESS phenolic active substances have been scientifically developed to provide favourable toxicity and ecotoxicity profiles. Preventol® CMK and Preventol® O extra are successfully used as active substances in effective disinfectants. Chemical identities and biodegradability of LANXESS products are summarised in table 1.

LANXESS phenolic derivatives are not only an excellent choice for surface disinfection in hospital, industrial and institutional areas, they are also used for veterinary disinfection.

LANXESS takes care of obtaining necessary approvals and registrations and provides necessary support to customers as well as technical and R&D support.

Table 1: Preventol® CMK and Preventol® O extra: chemical identities and biodegradability

Name	Preventol® CMK	Preventol® O extra
Appearance		
Chemical structure		
Chemistry	<i>p</i> -chloro- <i>m</i> -cresol	α -phenylphenol
Synonyms	Chlorocresol, 4-chloro-3-methylphenol	2-phenylphenol, biphenyl-2-ol
CAS number	59-50-7	90-43-7
Active substance	Min. 99.8%	Min. 99.5%
Melting point	63-65 °C	≥ 56 °C
Biodegradability	Readily biodegradable	Readily biodegradable

Our active substances have been used for many years all over the world, due to their safety profile and strong efficacy performance.

Combining Preventol® CMK and Preventol® O extra achieves a broader spectrum of activity, whilst at the same time keeping required concentration rates, and cost, as low as possible.

Preventol® phenolic products show several advantages in disinfection applications:

- Broad spectrum efficacy against bacteria, fungi and enveloped viruses
- Proven efficacy against *Mycobacterium tuberculosis*
- Less likely to lead to the development of acquired resistance when compared with certain other disinfectant formulations (when used as recommended)
- Reliable performance in the presence of organic matter
- Favourable toxicity and ecotoxicity profiles
- Widely accepted worldwide by competent authorities & registration departments
- Excellent disinfectant performance and stability over a wide pH range
- Outstanding compatibility with anionic detergents - additional cleaning power
- Excellent performance at low temperatures
- Long product shelf-life
- Can be readily formulated with other active substances, e.g. other phenolics, glutaraldehyde, pine oil, alcohols and organic acids.

LANXESS PREVENTOL® PRODUCTS DIFFER SUBSTANTIALLY FROM PHENOL

Why are Preventol® phenolic actives sometimes confused with phenol?

Phenolic derivatives, such as Preventol® CMK and Preventol® O extra were developed to replace phenol due to its toxicity profile and to achieve better efficacy. Despite the similar-sounding name, LANXESS phenolic products differ substantially from phenols. They have a different molecular structure and different characteristics.

The main advantages of Preventol® CMK and Preventol® O extra over phenol are:

- Better toxicity profile
- Broad spectrum efficacy
- Approved in many countries and well accepted for disinfection use

As shown in table 2, phenol is acutely more toxic than Preventol® CMK and Preventol® O extra, which are not classified at all or are in low toxicity classes only.

Preventol® CMK and Preventol® O extra are synthesised on a large scale for industrial applications, such as disinfection and material protection. LANXESS products are well studied and a large amount of data is available for disinfection applications. Preventol® CMK and Preventol® O extra are successfully used for disinfection applications in different regions all over the world.

Table 2: Comparison of human toxicity classification (acc. to EU CLP Regulation) of our Preventol® products and phenol

Substance	Acute Toxicity Category and Hazard statement			Further Toxicity Categories and Hazard statements			Hazard symbol
	Oral	Dermal	Inhalation	Mutagenicity	Specific Target Organ Toxicity (STOT) – Repeated Exposure	Other Hazards	
Phenol	Toxic H301	Toxic H311	Toxic H331	Suspected of causing genetic defects H341	STOT RE 2 H373	Skin Corr.1B H314	
Preventol® CMK (p-chloro-m-cresol)¹	Harmful H302	No classification to apply	No classification to apply	No classification to apply	No classification to apply	STOT SE 3 H335 Skin Corr. 1C H314 Eye Dam.1 H318 Skin Sens. 1B H317	
Preventol® O extra (o-phenylphenol)	No classification to apply	No classification to apply	No classification to apply	No classification to apply	No classification to apply	STOT SE 3 H335 Skin Irrit 2 H315 Eye Irrit. 2 H319	

¹: Acc. to new classification for the substance, 13th ATP ((EU) 2018/1480) to CLP (EC) No. 1272/2008

H301: Toxic if swallowed; H302: Harmful if swallowed; H311: Toxic in contact to skin; H314: Causes severe skin burns and eye damage. (Corrosive in > 1 of 3 animals; Category 1B: in >3 minutes - ≤ 1 hour. Category 1C: in > 1 hour - ≤ 4 hours.); H315: Causes skin irritation; H317: May cause an allergic skin reaction; H318: Causes serious eye damage; H319: Causes serious eye irritation; H331: Toxic if inhaled; H335: May cause respiratory irritation; H373: May cause damage to organs; H341: Suspected of causing genetic defects

- Phenolic disinfectant actives are toxicologically safe when dosed as per the recommended manufacturers instructions.
- Phenolic active substances are non irritating to skin in ready-to-use concentrations below 1%.

BROAD SPECTRUM EFFICACY – IN THE PRESENCE OF ORGANIC MATTER



The choice of a highly effective disinfectant is crucial to effectively control contamination and reduce the transmission of pathogenic germs.



LANXESS Preventol® products are perfectly suited for heavy-duty surface disinfection:

- Broad efficacy against bacteria, fungi and enveloped viruses, especially effective against *Mycobacterium tuberculosis*
- Reliable under difficult conditions
 - Effective in the presence of dirt, blood or sputum
 - Not impacted by hard water
- Quick reaction rate

Table 3 shows the antimicrobial efficacy, reaction rate and environmental influence on the efficacy of LANXESS Preventol® products, compared to common active substances for disinfection applications.

Table 3: Antimicrobial efficacy of various disinfectant active substances

	Reaction rate	Gram+ bacteria		Spores	Gram – bacteria	Fungi	Viruses	Influence of environment on efficacy
		Vegetative forms	Mycobacteria					
Preventol® phenolics	fast	very effective	very effective	not effective	very effective	very effective	selectively effective	low
Quats	slow	not effective	not effective	not effective	moderately effective	moderately effective	selectively effective	high
Glutaraldehyde	fast	very effective	very effective	not effective	very effective	very effective	selectively effective	high
Alcohols	fast	very effective	very effective	not effective	very effective	moderately effective	selectively effective	low
Peracetic acid	fast	very effective	very effective	not effective	very effective	very effective	selectively effective	high
Formaldehyde	slow	very effective	very effective	not effective	very effective	moderately effective	selectively effective	high
Iodine	fast	very effective	moderately effective	not effective	moderately effective	moderately effective	selectively effective	high
Guanidines	fast	not effective	not effective	not effective	moderately effective	moderately effective	selectively effective	high

very effective
 moderately effective
 selectively effective
 not effective

MEETING THE EUROPEAN STANDARD FOR SURFACE DISINFECTANTS

To demonstrate the efficacy of our active substances, Preventol® CMK and Preventol® O extra, representative standard formulation (SF-CMK or SF-OPP) containing 10% active substances were developed and tested using the

European standards EN 1276, EN 1650, EN 136 EN 14348. The standard formulations were only developed to illustrate the efficacy of our active substances and products are not available in the market.

Table 4: Effective concentrations² [%] of CMK with using European standard EN 1276, EN 1650, EN 13697 and EN 14348 under clean conditions.

Test organisms	Effective concentration [%]			
	EN 1276	EN 1650	EN 13697	EN 14348
<i>Staphylococcus aureus</i>	0.08		0.10	
<i>Escherichia coli</i>	0.08		0.08	
<i>Pseudomonas aeruginosa</i>	0.20		0.15	
<i>Enterococcus hirae</i>	0.05		0.03	
<i>Candida albicans</i>		0.15	0.10	
<i>Aspergillus brasiliensis</i>		0.30	0.25	
<i>Mycobacterium avium</i>				0.2
<i>Mycobacterium terrae</i> ³				0.2

Table 5: Effective concentrations² [%] of OPP with using European standard EN 1276, EN 1650, EN 13697 and EN 14348 under clean conditions.

Test organisms	Effective concentration [%]			
	EN 1276	EN 1650	EN 13697	EN 14348
<i>Staphylococcus aureus</i>	0.05		0.05	
<i>Escherichia coli</i>	0.05		0.05	
<i>Pseudomonas aeruginosa</i>	0.25		0.15	
<i>Enterococcus hirae</i>	0.03		0.05	
<i>Candida albicans</i>		0.05	0.08	
<i>Aspergillus brasiliensis</i>		0.15	>0.5	
<i>Mycobacterium avium</i>				0.1
<i>Mycobacterium terrae</i> ³				0.1

²: These results do not replace the evaluation of the efficacy of your own formulation. As the efficacy of a disinfectant formulation is dependent on different parameters, the efficacy of each formulation should be evaluated.

³: *Mycobacterium terrae* is the surrogate for *Mycobacterium tuberculosis* in national and international standards on testing of the efficacy of chemical disinfectants. Both species show similar resistance.

For information on EN standards, please refer to page 7.

LANXESS can provide technical support and independent efficacy testing to help develop optimized disinfectant formulations.

Certificate of Analysis

Analysis Conducted by: Thomas Grabe
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 Kennedy Lake Towers
 30000 DUSA
 UNITED STATES OF AMERICA
 E-mail: thomas.grabe@lanxess.com

Company
 LANXESS Deutschland GmbH
 Kennedyplatz 1
 50569 KÖLN

Date: 18.08.2021

Material description
 PREVENTOL O EXTRA
 BAG 25KG

Material
 56811110

Customer order data

Customer: LANXESS
 Material: PREVENTOL O EXTRA

Delivery data

Delivery no.	Delivered quantity	Planned delivery date	Order no.	Vehicle ID
3017101720 / 000010	3.000,000 KG	01.10.2021	3032974373 / 000010	1XHN-594

Batch	Delivered quantity	Date of manuf.	Best before
CHHYDZ0165	3.000,000 KG	09.08.2021	09.08.2023

A sample was taken according to procedure; the result of analysis was:

Inspection method/ Characteristic	Result	Unit
1) APPEARANCE VISUAL 1=MEETS DESCRIPTION	1	
2) Content Gaschromatographic o-Phenylphenol	99,9	%
3) Point of solidification Thermometric Point of solidification	56	°C

LANXESS

Energizing Chemistry

Preventol® O extra

UN 3077

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-HYDROXYBIPHENYL)



RÜCKSEITE

VORDERSEITE



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



PREVENTOL O EXTRA

Version 1.0 Revision Date: 02.11.2018 SDS Number: 103000002517 Date of last issue: 26.11.2017
Country / Language: IE / EN(GB)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : PREVENTOL O EXTRA
Product code : 00430501
Substance name : 2-phenylphenol (ISO)
Index-No. : 604-020-00-6
EC-No. : 201-993-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-stance/Mixture : Biocide for industrial application

1.3 Details of the supplier of the safety data sheet

Supplier : LANXESS Distribution GmbH
51369 Leverkusen, Germany
Telephone : +4922188852288
Telefax : +492143055787
E-mail address of person responsible for the SDS : infosds@lanxess.com

1.4 Emergency telephone number

+44 0870 190 6777. National Chemical Emergency Centre

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Components

Chemical name	CAS-No. EC-No.	Classification	Concentration (% w/w)

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2-phenylphenol (ISO)	90-43-7 201-993-5	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335; Respiratory system Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor Aquatic Chronic: 1	>= 99
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Do NOT induce vomiting.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No special measures required.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Avoid formation of respirable particles.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
- Hygiene measures : When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.
- Dust explosion class : St2

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
- Recommended storage temperature : < 40 °C
- Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

- Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

This information is not available.

Personal protective equipment

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Eye protection	:	Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Hand protection	:	
Material	:	Polychloroprene - CR
Wearing time	:	< 60 min
Material	:	Polyvinyl chloride - PVC
Wearing time	:	< 60 min
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations
Skin and body protection	:	Wear suitable protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter. Dust safety masks are recommended when the dust concentration is more than 10 mg/m ³ .
Filter type	:	Recommended Filter type: P2 filter

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	powder
Colour	:	colourless
Odour	:	slight
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	56.7 °C
Boiling point/boiling range	:	286 °C (1,013 hPa)
Flash point	:	138 °C Method: DIN 51758, closed cup

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Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Burning number	:	2 (20 °C) Method: VDI 2263-1
Upper explosion limit / Upper flammability limit	:	Upper explosion limit 9.5 %(V)
Lower explosion limit / Lower flammability limit	:	Lower explosion limit 1.4 %(V)
Vapour pressure	:	0.474 Pa (20 °C) 0.906 Pa (25 °C)
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.26 g/cm ³ (20 °C)
Bulk density	:	670 kg/m ³
Solubility(ies) Water solubility	:	0.5 - 0.6 g/l
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	515 °C
Decomposition temperature	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2 Other information

Dust explosion class	:	St2
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SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

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10.3 Possibility of hazardous reactions

Hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Stable under recommended storage conditions.
No hazards to be specially mentioned.

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
Take precautionary measures against static discharge.
To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.
Prevent dust accumulation.
In the case of dusty organic products the possibility of a dust explosion should always be considered.

10.5 Incompatible materials

Materials to avoid : No specific data.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

2-phenylphenol (ISO):

Acute oral toxicity : LD50 (Rat, male and female): 2,733 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC0 (Rat, male and female): > 0.036 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

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Remarks: Extrapolation according to Regulation (EC) No. 440/2008

Skin corrosion/irritation

Components:

2-phenylphenol (ISO):

Species: Rabbit
Method: OECD Test Guideline 404
Result: Irritating to skin.

Serious eye damage/eye irritation

Components:

2-phenylphenol (ISO):

Species: Rabbit
Method: OECD Test Guideline 405
Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Components:

2-phenylphenol (ISO):

Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: no

Germ cell mutagenicity

Components:

2-phenylphenol (ISO):

Genotoxicity in vitro : Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test system: Bacteria
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 473
Result: negative
GLP: no

Genotoxicity in vivo : Species: Mouse (male)
Application Route: Oral
Result: negative

Test Type: Micronucleus test
Species: Rat (male)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Components:

2-phenylphenol (ISO):

Species: Rat, (male)
Application Route: Oral
Exposure time: 2 Years
NOAEL: 200 mg/kg body weight
Method: OECD Test Guideline 453
Result: negative
GLP: yes

Species: Rat, (female)
Application Route: Oral
Exposure time: 2 Years
NOAEL: \geq 647 mg/kg body weight
Method: OECD Test Guideline 453
Result: negative
GLP: yes

Reproductive toxicity

Components:

2-phenylphenol (ISO):

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Duration of Single Treatment: 175 d
Fertility: NOAEL: \geq 500 mg/kg body weight
Method: OECD Test Guideline 416
Result: No effects on fertility and early embryonic development were detected.
GLP: yes

Effects on foetal development : Species: Rat
Application Route: Oral
Duration of Single Treatment: 28 d

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



PREVENTOL O EXTRA

Version
1.0

Revision Date:
02.11.2018

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Developmental Toxicity: NOAEL: 250 mg/kg body weight
Method: OECD Test Guideline 414

STOT - single exposure

Components:

2-phenylphenol (ISO):

Assessment: May cause respiratory irritation.

Repeated dose toxicity

Components:

2-phenylphenol (ISO):

Species: Rat, male
LOAEL: 200 mg/kg
Application Route: Oral
Exposure time: 2 yr
Method: OECD Test Guideline 453
GLP: yes
Remarks: Chronic toxicity

Species: Rat, female
LOAEL: 647 mg/kg
Application Route: Oral
Exposure time: 2 yr
Method: OECD Test Guideline 453
GLP: yes
Remarks: Chronic toxicity

Species: Rat, male and female
NOAEL: $\geq 1,000$ mg/kg
Application Route: Dermal
Exposure time: 21 d
Method: OECD Test Guideline 410
GLP: yes
Remarks: Subacute toxicity

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

2-phenylphenol (ISO):

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- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 4.5 mg/l
Exposure time: 96 h
GLP: yes
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.7 mg/l
Exposure time: 48 h
Remarks: Fresh water
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): 3.57 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water
- NOEC (Pseudokirchneriella subcapitata (microalgae)): 0.468 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water
- Toxicity to fish (Chronic toxicity) : NOEC: 0.036 mg/l
Exposure time: 21 d
Species: Pimephales promelas (fathead minnow)
GLP: yes
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.009 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water
- M-Factor (Long-term (chronic) aquatic hazard) : 1

12.2 Persistence and degradability

Components:

2-phenylphenol (ISO):

- Biodegradability : Test Type: aerobic
Result: Readily biodegradable.
Biodegradation: 70.8 - 75.7 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes
-

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12.3 Bioaccumulative potential

Components:

2-phenylphenol (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 22

Partition coefficient: n-octanol/water : log Pow: 3.18
Method: OECD Test Guideline 107

12.4 Mobility in soil

Components:

2-phenylphenol (ISO):

Distribution among environmental compartments : log Koc: 2.4 - 2.6

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

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SECTION 14: Transport information

14.1 UN number

ADN : UN 3077
ADR : UN 3077
RID : UN 3077
IMDG : UN 3077
IATA : UN 3077

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(2-HYDROXYBIPHENYL)
ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(2-HYDROXYBIPHENYL)
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(2-HYDROXYBIPHENYL)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(2-HYDROXYBIPHENYL)
IATA : Environmentally hazardous substance, solid, n.o.s.
(2-HYDROXYBIPHENYL)

14.3 Transport hazard class(es)

ADN : 9
ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADN
Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9



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ADR

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9



RID

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9



IMDG

Packing group : III
Labels : 9



IATA (Cargo)

Packing instruction (cargo aircraft) : 956: 400.00 KG
Packing group : III
Labels : 9



IATA (Passenger)

Packing instruction (passenger aircraft) : 956: 400.00 KG
Packing group : III
Labels : 9



14.5 Environmental hazards

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ADN

Environmentally hazardous : yes



ADR

Environmentally hazardous : yes



RID

Environmentally hazardous : yes



IMDG

Marine pollutant : yes



IATA (Passenger)

Environmentally hazardous : yes



IATA (Cargo)

Environmentally hazardous : yes



14.6 Special precautions for user / Additional advice

Hazard statements : Environmentally hazardous substance.
Irritating to skin and mucous membranes.
Irritating to the eyes.
Keep separated from foodstuffs.

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14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. : Neither banned nor restricted

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1	ENVIRONMENTAL HAZARDS	Quantity 1 100 t	Quantity 2 200 t
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15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

Full text of H-Statements

H315 : Causes skin irritation.
H319 : Causes serious eye irritation.
H335 : May cause respiratory irritation.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Irrit. : Eye irritation
Skin Irrit. : Skin irritation
STOT SE : Specific target organ toxicity - single exposure

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ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals

Further information

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet and its Annex [if required according to Regulation (EC) 1907/2006 (REACH)] is to describe the products in terms of their safety requirements. The given details do not imply any guarantee concerning the composition, properties or performance.



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