

QUALITY PROTECTS.



Product Overview
Cosmetic preservatives

QUALITY WORKS.

LANXESS

LANXESS Distribution GmbH

Head of Personal Care

Michael Bader
Phone: +49 (0) 221 8885 2390
Mobile: +49 (0) 175 30 19 115
E-Mail: michael.bader@lanxess.com

Regional Sales Europe

Austria / Benelux / Germany / Italy / Switzerland

Peter Gallert
Mobile: +49 (0) 175 30 19 167
E-Mail: peter.gallert@lanxess.com

France

Stephanie Galois-Drouard
Phone: +33 (0) 1 80 46 30 18
Mobile: +33 (0) 6 09 76 97 07
E-Mail: stephanie.galois-drouard@lanxess.com

Spain / Portugal

Rosa Maria Oñate
Phone: +34 933 415 249
Mobile: +34 629 721 369
E-Mail: rosa-maria.onate@lanxess.com

Turkey

Sadet Ersungur
Phone: +90 216 600 03 11
Mobile: +90 530 150 66 68
E-Mail: sadet.ersungur@lanxess.com

United Kingdom / Ireland

Dominika Blaszkow
Phone: +44 (0) 1635 568 648
Mobile: +44 (0) 7554 995 304
E-Mail: dominika.blaszkow@lanxess.com

Central Eastern Europe

Hristo Kabakchiev
Mobile: +421 915 913 131
E-Mail: hristo.kabakchiev@lanxess.com

Poland

Robert Rozej
Mobile: +48 784 580 482
E-Mail: robert.rozej@lanxess.com

Technical Marketing

Dr. Matthias Kunze
Phone: +49 (0) 221 8885 5127
Mobile: +49 (0) 175 30 19 172
E-Mail: matthias.kunze@lanxess.com

Regional Sales Central / North America

USA / Canada

Tony Mazzarella
Phone: +1 412 809 1522
Mobile: +1 412 398 5749
E-Mail: tony.mazzarella@lanxess.com

Mexico

Eloisa Miranda
Phone: +52 55 5262 4347
Mobile: +52 155 4355 4342
E-Mail: eloisa.miranda@lanxess.com

Regional Sales South America

Brazil

Denise Nasi
Phone: +55 (11) 3741 1536
Mobile: +55 (11) 98444 3289
E-Mail: denise.nasi@lanxess.com

Regional Sales Asia

China

Jiming Yan
Phone: +86 21 6109 8370
Mobile: +86 186 1601 7980
E-Mail: jiming.yan@lanxess.com

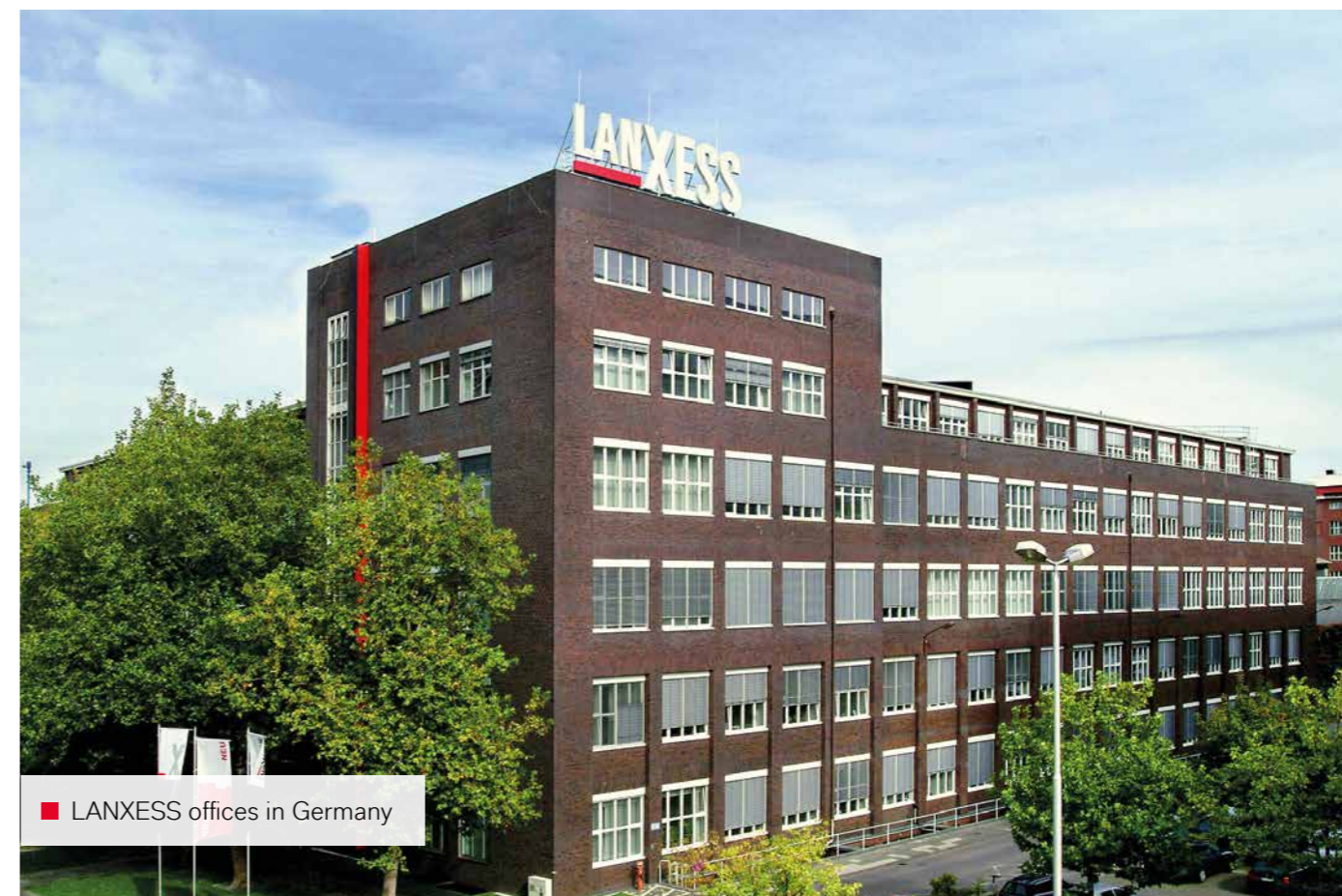
WELCOME TO LANXESS DISTRIBUTION

LANXESS is a leading German specialty chemicals producer, currently represented at 60 production sites worldwide. As a 100% subsidiary, LANXESS Distribution is focused on the marketing of premium chemical products, providing expert solutions and specialist advice to our customers.

Our Personal Care raw materials are notable for their high level of purity, making them especially suitable for the stringent quality requirements of the cosmetics industry. They can be used for a wide variety of applications from skin to nail care.

The Solbrol® range of cosmetic preservatives includes parabens as well as specially designed blends for paraben-free protection of formulations. We also offer renewable solutions for protection of natural formulations.

QUALITY PROTECTS.



PARABENS

Due to their proven safety profile and efficacy, parabens are used in nearly all cosmetic applications. Solbrol® M and Solbrol® P are also available in the form of a sodium salt in order to increase dissolving speed.

While parabens can be used individually, preservation results are usually better when combining different types of parabens.



Trade Name	INCI Name	Properties			MIC* Data (%)				Area of Application				
		Product Form	Dosage (%)	pH-Range	Pa.	S.a.	C.a.	A.b.	Skin Care	Hair Care	Oral Care	Color Cosmetics	Deodorants
Solbrol® A	Ethylparaben	powder	0.2–0.4	3–8	0.15	0.1	0.05	0.03	X	X	X	X	X
Solbrol® M	Methylparaben	powder	0.2–0.4	3–8	0.16	0.2	0.09	0.06	X	X	X	X	X
Solbrol® M Na	Sodium Methylparaben	powder	0.2–0.4	3–8	0.16	0.2	0.09	0.06	X	X	X	X	X
Solbrol® P	Propylparaben	powder	0.1–0.14	3–8	0.10	0.03	0.02	0.03	X	X	X	X	X
Solbrol® P Na	Sodium Propylparaben	powder	0.1–0.14	3–8	0.10	0.03	0.02	0.03	X	X	X	X	X

* MIC = Minimum Inhibitory Concentration
(Pa. = Pseudomonas aeruginosa, S.a. = Staphylococcus aureus, C.a. = Candida albicans, A.b. = Aspergillus brasiliensis)



PARABEN-FREE PRESERVATIVES

PUROLAN® PE and **PUROLAN® BA** are solvents that work synergistically with other preservatives. The efficacy of these solvents is significantly improved in combination with organic acids (**Solbrol® LB2**).

The organic acids and respective salts **Solbrol® BZ**, **Solbrol® BZ Na**, **Solbrol® SC Na** perform best in acidic formulations. Typically they are used in combination with other antimicrobials or synergists.

Solbrol® PEH is a combination of Phenoxyethanol with Ethylhexylglycerin. Since this blend is free from organic acids, it is also active at pH levels of up to 9.

Solbrol® TP, a combination of Phenoxyethanol and Triethylene Glycol, is the perfect solution for even more alkaline formulations. This blend can be used up to a pH level of 10 and above.



Trade Name	INCI Name	Properties			MIC* Data (%)				Area of Application				
		Product Form	Dosage (%)	pH-Range	Pa.	S.a.	C.a.	A.b.	Skin Care	Hair Care	Oral Care	Color Cosmetics	Deodorants
Paraben-free single ingredients													
Solbrol® BZ	Benzoic Acid	powder	0.1 – 0.5	2 – 6.5	0.15	0.15	0.2	0.02	X	X	X	X	X
Solbrol® BZ Na	Sodium Benzoate	powder	0.1 – 0.5	2 – 6.5	0.15	0.15	0.2	0.02	X	X	X	X	X
Solbrol® SC Na	Sodium Salicylate	powder	0.2 – 0.5	2 – 6.5	0.25	0.125	0.25	0.25	X	X		X	
PUROLAN® BA	Benzyl Alcohol	liquid	0.4 – 1.0	3 – 8.5	0.35	0.65	0.5	0.32	X	X	X		X
PUROLAN® PE	Phenoxyethanol	liquid	0.4 – 1.0	3 – 8.5	0.55	0.7	0.45	0.3	X	X			X
Paraben-free blends													
Solbrol® LB2	Dehydroacetic Acid, Benzoic Acid, Benzyl Alcohol	liquid	0.5 – 1.0	2 – 6.5	0.2	0.15	0.13	0.3	X	X			
Solbrol® PEH	Phenoxyethanol, Ethylhexylglycerin	liquid	0.5 – 1.0	3 – 9	0.4	0.4	0.25	0.25	X	X		X	X
Solbrol® SP	Propanediol, Salix Alba Bark Extract	liquid	0.4 – 1.0	3 – 8	0.125	0.125	0.5	0.5	X	X			X
Solbrol® TP	Phenoxyethanol, Triethylene Glycol	liquid	0.4 – 1.0	3 – 13	0.22	0.47	0.32	0.23	X	X			

* MIC = Minimum Inhibitory Concentration
(Pa. = Pseudomonas aeruginosa, S.a. = Staphylococcus aureus, C.a. = Candida albicans, A.b. = Aspergillus brasiliensis)

ANTIOXIDANTS

The emollients **PUROLAN® PD-LO**, **HD-LO** and **OD** have a synergistic effect with preservatives. They are especially suitable for formulations with low fragrance content due to their low odor. **PUROLAN® PD-LO natural** is a renewable alternative for organic formulations.

Solbrol® CP uses the synergistic effect of **PUROLAN® OD** in combination with the fragrance Phenethyl Alcohol. This results in a very effective blend with a well balanced efficacy against both bacteria and fungi.

Solbrol® FFA and **Solbrol® FFA Plus** are natural blends based on fruit acids. All ingredients are renewable. **Solbrol® FFA** offers good protection against microbes and is particularly effective against bacteria. **Solbrol® FFA Plus** shows stronger performance, in particular against fungi. It is suitable for protecting even challenging applications like wet wipes.



Trade Name	INCI Name	Properties			MIC* Data (%)				Area of Application					
		Product Form	Dosage (%)	pH-Range	Pa.	S.a.	C.a.	A.b.						
Solbrol® CP	Caprylyl Glycol, Phenethyl Alcohol	liquid	0.3– 0.8	4–13	0.3	0.2	0.25	0.175	X	X				X
Solbrol® FFA	Aqua, Lactic Acid, Propanediol, Citric Acid, Tartaric Acid, Gluconic Acid	liquid	0.8– 1.5	2–6.0	0.05	0.15	1.0	1.0	X	X	X	X	X	X
Solbrol® FFA Plus	Aqua, Lactic Acid, Phenylpropanol, Propanediol, Citric Acid, Tartaric Acid, Gluconic Acid	liquid	0.5– 1.0	2–6.0	0.05	0.1	0.6	0.5	X	X	X	X	X	X
PUROLAN® PD-LO**	Pentylene Glycol	liquid	1.0– 3.0	2–13	1.6	3.2	1.6	3.2	X	X			X	
PUROLAN® PD-LO natural**	Pentylene Glycol	liquid	1.0– 3.0	2–13	1.6	3.2	1.6	3.2	X	X			X	
PUROLAN® HD-LO**	1,2-Hexanediol	liquid	1.0– 5.0	2–13	0.63	2.5	1.25	0.63	X	X			X	
PUROLAN® OD	Caprylyl Glycol	liquid	1.0– 3.0	2–13	0.63	1.25	0.31	0.16	X	X			X	

* MIC = Minimum Inhibitory Concentration
(P.a. = Pseudomonas aeruginosa, S.a. = Staphylococcus aureus, C.a. = Candida albicans, A.b. = Aspergillus brasiliensis)
** LO = low odor grade

Skin Care
Hair Care
Oral Care
Color Cosmetics
Deodorants

OVERVIEW OF USES

The table below shows the recommended pH level as well as the application areas in which the respective products are commonly used. Please note that this does not necessarily exclude the suitability for other uses.

Trade Name	pH range							Skin Care	Hair Care	Oral Care	Color Cosmetics	Deodorants
	0	2	4	6	8	10	12					
Parabens												
Solbrol® A			█	█	█			X	X	X	X	X
Solbrol® M			█	█	█			X	X	X	X	X
Solbrol® M Na			█	█	█			X	X	X	X	X
Solbrol® P			█	█	█			X	X	X	X	X
Solbrol® P Na			█	█	█			X	X	X	X	X
Paraben-free single ingredients												
Solbrol® BZ*			█	█	█			X	X	X	X	X
Solbrol® BZ Na			█	█	█			X	X	X	X	X
Solbrol® SC Na			█	█	█			X	X		X	
PUROLAN® BA			█	█	█			X	X	X		X
PUROLAN® PE			█	█	█			X	X			X
Paraben-free blends												
Solbrol® LB2			█	█	█			X	X			
Solbrol® PEH			█	█	█			X	X		X	X
Solbrol® SP			█	█	█			X	X			X
Solbrol® TP			█	█	█			X	X			
Synergists												
Solbrol® CP			█	█	█			X	X			X
Solbrol® FFA			█	█	█			X	X	X	X	X
Solbrol® FFA Plus			█	█	█			X	X	X	X	X
PUROLAN® PD-LO**			█	█	█			X	X		X	
PUROLAN® PD-LO natural**			█	█	█			X	X		X	
PUROLAN® HD-LO**			█	█	█			X	X		X	
PUROLAN® OD			█	█	█			X	X		X	

* only for non-EU countries
** LO = low odor grade

PRODUCT OVERVIEW

Trade Name	INCI Name	CAS No.
Parabens		
Solbrol® A	Ethylparaben	120-47-8
Solbrol® M	Methylparaben	99-76-3
Solbrol® M Na	Sodium Methylparaben	5026-62-0
Solbrol® P	Propylparaben	94-13-3
Solbrol® P Na	Sodium Propylparaben	35285-69-9
Paraben-free single ingredients		
Solbrol® BZ*	Benzoic Acid	65-85-0
Solbrol® BZ Na	Sodium Benzoate	532-32-1
Solbrol® SC Na	Sodium Salicylate	54-21-7
PUROLAN® BA	Benzyl Alcohol	100-51-6
PUROLAN® PE	Phenoxyethanol	122-99-6
Paraben-free blends		
Solbrol® LB2	Dehydroacetic Acid, Benzoic Acid, Benzyl Alcohol	–
Solbrol® PEH	Phenoxyethanol, Ethylhexylglycerin	–
Solbrol® SP	Propanediol, Salix Alba Bark Extract	–
Solbrol® TP	Phenoxyethanol, Triethylene Glycol	–
Synergists		
Solbrol® CP	Caprylyl Glycol, Phenethyl Alcohol	–
Solbrol® FFA	Aqua, Lactic Acid, Propanediol, Citric Acid, Tartaric Acid, Gluconic Acid	–
Solbrol® FFA Plus	Aqua, Lactic Acid, Phenylpropanol, Propanediol, Citric Acid, Tartaric Acid, Gluconic Acid	–
PUROLAN® PD-LO**	Pentylene Glycol	5343-92-0
PUROLAN® PD-LO natural**	Pentylene Glycol	5343-92-0
PUROLAN® HD-LO**	1,2-Hexanediol	6920-22-5
PUROLAN® OD	Caprylyl Glycol	1117-86-8

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LANXESS

LANXESS Distribution GmbH

LANXESS Distribution GmbH

Chempark Leverkusen
Kaiser-Wilhelm-Allee 40
51369 Leverkusen
Germany

Tel.: +49 (0) 221 8885 2390

www.purolan.com
www.lanxess-distribution.com

Health and safety information

Appropriate documentation was compiled with information on the health and safety measures that have to be observed in handling the LANXESS products mentioned in this brochure. For materials mentioned here that are not LANXESS products, the operational hygiene and other safety measures recommended by the respective manufacturers must be observed. Before working with these products, you must read and familiarise yourself with the available information on their dangers, proper use and handling. This point is of decisive importance.

Information is available in various forms: such as safety data sheets, product information and product labels. Please contact your LANXESS representative in Germany or the Department of Regulatory Affairs and Product Safety of LANXESS Deutschland. For business in the USA, please contact the LANXESS Product Safety and Regulatory Affairs Department in Pittsburgh, Pennsylvania.

Information on Regulatory Compliance

For some end use purposes of the products found in this brochure, the applicable regulations must be observed, including those of the FDA, BfR, NSF, USDA and CPSC. If you have any questions regarding the approval status of these products, please contact your representative at LANXESS Deutschland GmbH or the Department of Regulatory Affairs and Product Safety of LANXESS Deutschland GmbH or, for business in the USA, your representative at LANXESS Corporation, the LANXESS Regulatory Affairs Manager in Pittsburgh, Pennsylvania.

How and for which purposes you utilise our products, our technical support and our information (oral, written or through product assessments) is beyond our control. The same applies for suggested formulations and recommendations. Therefore it is indispensable that you check our products, our technical support and our information for their suitability for the intended processes and purposes. The application-specific analysis must encompass at least suitability tests in regard to technical as well as health, safety and environmental aspects. Such testing has not necessarily been done by us. Unless agreed to otherwise in writing, all products are sold exclusively in accordance with our general terms and conditions for sale and delivery. Information and technical support are provided without warranty (we reserve the right to make changes at any time). It is expressly agreed that you release us from any possible liability resulting from the use of our products, technical support and information due to fault, contract or other reasons and that you assume this liability yourself.

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