Finishing

Performance Chemicals
for detergents
and formulators

BASF
The Chemical Company

Overview

Functionality	Chemistry	BASF product
Wetter / emulsifier	Alcohol ethoxylates	Lutensol® TO types
Wetter / emulsifier	Alcohol alkoxylates	Lutensol® XL types
Wetter / emulsifier	Alcohol ethoxylates	Lutensol® XP, ON types
Wetter / emulsifier	Alcohol ethoxylates	Lutensol® AT types
Emulsifier	Various ethoxylates	Emulan® types
Metal-ion control, chelating agent	Amino carboxylates	Trilon® types
Abrasion resistance / water repellency / handle	Oxidised polyethylene wax	Luwax® OA
Abrasion resistance / water repellency / handle	Wax emulsions	Poligen® WE 7
Sewability	Oxidised polyethylene wax	Luwax® OA 3
Sewability	Wax emulsions	Poligen® WE 6 / WE 1
Preservative	Biocide active ingredients	Protectol® BN, HT, PE types

Wetters / emulsifiers

	Lutensol®					Emulan®			
	TO types	XL types	XP types	ON types	AT types	AF	AT 9	TO types	OC,OG,OU
Hydrolysis in acids	+	+	+	+	+	+	+	+	+
Stability to alkaline earth ions	++	++	++	++	++	++	++	++	++
Wetting / deaerating / high liquor pickup	+	++	+	+	–	–	0	–	–
Low-foaming	0	–	0	–	+	+	+	–	+
Foam disintegration	0	0	+	–	0	+	+	–	0
Emulsification of silicone oils	++	+	0	0	++	++	++	++	++
Use in amino-modified silicone microemulsions	++	+	0	0	–	–	–	– –	– –
Ecology	++	++	++	++	++	++	++	++	++
Minimal gel phase	+	+	++	++	–	–	0	+	–

Chelating agents

Metal-ion control	Trilon® A types	B types	C types	M types	P
Reduction of water hardness (Ca^{2+}, Mg^{2+})	++	+	+	++	+
Binding capacity (heavy-metal ions)	0	++	++	0	++
Ecology	++	not readily biodegradable	not readily biodegradable	++	bioeliminable

++ = excellent + = good 0 = average – = poor – – = very poor

Raw Materials for Textile Chemicals

Waxes and wax emulsions

	Luwax®		Poligen®			
	OA	OA 3, ES 9696	WE 1	WE 6	WE 7	WE 9
Increase in sewability	+	++	++	++	+	++
Smooth handle	++	+	+	+	++	+
Compatibility with silicones	+	+	+	+	+	++
Abrasion resistance	++	+	+	+	++	+
Increase in tear strength	+	++	+	++	+	+

Biocide active ingredients

	Protectol®		
	BN types	HT types	PE types
Antibacterial control	++	++	+
Antifungal control	o	+	o
Suitability in alkali	o	++	+
Suitability under acid conditions	++	o	+
Suitability in neutral conditions	+	+	+
Compatibility with other additives	+	+	++
Health and safety profile	+	o	++
Biocidal regulatory approvals Europe	++	++	++
Biocidal regulatory approvals NAFTA	++	+	– –

Due to a history of safe use in consumer products, BASF's biocides such as Protectol® BN types and Protectol® PE types have an excellent health and safety profile. Additionally it is important to choose biocidal active ingredients with the appropriate regulatory approvals. For in-can preservation of industrial products BASF has approvals with the US EPA for Protectol® BN types (Myacide® AS) and Protectol® HT types (Myacide® HT). Both of these products as well as Protectol® PE types have been notified by BASF for in-can preservation under the European Biocidal Products Directive. For full details of regulatory approvals you should enquire via your local BASF sales office.

Requirement for European Directive 98/8/EC: Use biocides safely. Always read the label and product information before use.

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