

# QUALITY PERFORMS.



**Solutions** for versatile applications  
Additives for polyurethanes

**QUALITY WORKS.**

**LANXESS**  
Energizing Chemistry

# ADDITIVES FOR POLYURETHANES

Product	Chemical description	Rigid foam				Flexible foam		
		Panels & Bunstock	Spray Foam	Appliance & Pipe Insulation	1 K	Slab-ester	Slab-ether	Molded-integral
<b>Flame Retardants</b>								
Amgard® CU	Organic phosphonate					■	■	■
Disflamoll® 51036	Phosphate ester blend							
Disflamoll® 51092	Butylated triphenyl phosphate	■				■	■	■
Disflamoll® DPK	Cresyl diphenyl phosphate	■						
Disflamoll® DPO	2-Ethylhexyl diphenyl phosphate							
Disflamoll® TKP	Tricresyl phosphate							
Disflamoll® TOF	Tris(2-ethylhexyl) phosphate							
Emerald Innovation® NH-1	Phosphorus compound					■	■	■
Firemaster® 504/508*	Tetrabromophthalate diol blend	■	■					
Firemaster® 2100R	Decabromodiphenyl ethane							
Levagard® 2100	Reactive phosphorus compound	■	■					
Levagard® 3000	Oligomeric phosphate ester	■				■	■	■
Levagard® 4090 N	N,N-Hydroxyethylaminoethane phosphonic acid ester	■	■					
Levagard® DMPP	Dimethylpropane phosphonate	■						
Levagard® PP	Tris(2-chloroisopropyl) phosphate (TCPP)	■	■		■		■	
Levagard® TEP-Z	Triethyl phosphate	■	■		■			
PHT4-Diol™	Tetrabromophthalate diol	■	■					
PHT4-Diol™ LV	Tetrabromophthalate diol	■	■					
Reofos® 35	Isopropylated triphenyl phosphate	■				■	■	■
Reofos® 50	Isopropylated triphenyl phosphate	■				■	■	■
Reofos® 65	Isopropylated triphenyl phosphate	■				■	■	■
Reofos® 95	Isopropylated triphenyl phosphate	■				■	■	■
<b>Catalysts</b>								
Addocat® DB	Benzyl dimethylamine (BDMA)	■		■		■		
Addocat® PP	Blend of tertiary amines	■		■		■		
Addocat® 10/9	Aminoalkanol ester							
Addocat® 105	Triethylenediamine (TEDA) in DPG	■	■	■			■	■
Addocat® 108	Bis(2-dimethylaminoethyl)ether (BDMAEE) in DPG	■	■	■			■	■
Addocat® 117	1,4-Dimethylpiperazine (DMP)	■		■		■		
Addocat® 118	2,2-Dimorpholinodiethylether (DMDEE)		■	■	■	■	■	■
Addocat® 1221 VN	Blend of tertiary amines in a polyether polyol	■						
Addocat® 1926	Blend of tertiary amines in a polyether polyol	■		■				
<b>Emulsifiers &amp; Foam Stabilizers</b>								
Addovate® DD 1092	Ionic emulsifier							
Addovate® EM	Non-ionic emulsifier					■		
Addovate® SM optimized	Ionic emulsifier	■	■	■		■		
Addovate® SV	Ionic emulsifier					■		
Addovate® TX	Ionic emulsifier					■		
Addovate® 3240	Non-ionic emulsifier					■		
<b>Crosslinkers</b>								
Addolink® 1604	Isobutyl 4-chloro-3,5-diaminobenzoate (CDABE)							
Yapox CL 30/10	Hydroquinone bis(2-hydroxyethyl)ether (HQEE), >99.5%							
Yapox LM 30/10	Hydroquinone bis(2-hydroxyethyl)ether (HQEE), ≥90.0%							
<b>Hydrolysis Stabilizers</b>								
Stabaxol® I	Monomeric carbodiimide							
Stabaxol® L	Monomeric carbodiimide							
Stabaxol® P 200	Polymeric carbodiimide					■		
Stabaxol® P	Polymeric carbodiimide							
Stabaxol® P 100	Polymeric carbodiimide							
<b>Modifiers &amp; Plasticizers</b>								
Adimoll® BO	Benzyl ethylhexyl adipate (BEHA)							
Adimoll® DO	Bis(2-ethylhexyl) adipate (DEHA)							
Mesamoll®/Mesamoll® II	Alkylsulfonic phenyl ester (ASEP)							
Modulast® PUR	Proprietary							
Modulast® ACE	Dipropylene glycol dibenzoate							
Modulast® CLS	Dipropylene glycol dibenzoate							
Ultramol® VII	Adipic acid polyester							
Ultramol® VII LV	Adipic acid polyester							
<b>Other PUR Additives</b>								
Addovate® BA	Aqueous polyurethane dispersion							
Addovate® LP	Alkali aluminium silicate in castor oil							
Potlife Enhancer II	Organic acid chloride in Mesamoll® II							

\* not available in the EU

Product	Elastomers			Coatings	Adhesives	Sealants	Special characteristics
	Cast	Cellular	TPU				
				■			High flame retardant efficiency
				■			Good low temperature performance
	■	■	■	■	■	■	General purpose flame retardant
	■	■	■	■	■	■	General purpose flame retardant
	■	■	■	■	■	■	FDA approval
							Low emissions
				■	■	■	Excellent low temperature performance
							Low scorch
							Br / P-synergism, low viscosity, improved process handling & storage vs. neat PHT4-Diol™
				■			Excellent balance of physical properties, flammability performance and processability
							Reactive
	■	■	■	■	■	■	Low emissions, compatible with polyether & polyester polyols
	■						Reactive
				■	■	■	High flame retardant efficiency
				■	■	■	Standard flame retardant for all types of rigid PUR/PIR foam
				■			Effective viscosity reducer
							Reactive, excellent compatibility with a broad range of commercial polyols & blowing agents
							Reactive, low viscosity, improved process handling & storage vs. neat PHT4-Diol™
	■	■	■	■	■	■	General purpose flame retardant
	■	■	■	■	■	■	General purpose flame retardant
	■	■	■	■	■	■	General purpose flame retardant
	■	■	■	■	■	■	Low volatility
	■			■	■	■	Moderate activity universal gelling co-catalyst, good emulsifier
	■			■	■	■	Balanced catalyst, improves flowability, soluble in water
				■	■	■	Moderate activity gelling catalyst, especially useful for wood coatings
				■	■	■	Strong multi-purpose gelling catalyst
							Standard strong blowing catalyst for rigid and flexible foams, improves flowability
							Latent gelling co-catalyst, improves solubility and surface cure
				■	■	■	Selective blowing catalyst for 1K systems, improves shelf-life
							Balanced catalyst for rigid foam, applicable to PIR formulations
							Balanced catalyst for rigid foam with improved metering compared to Addocat® 726 B
	■						Emulsifier for cellular elastomers (e.g. Vulkollan®), extends cream time
							Strong emulsifier & dispersant, improves open-cell structure
	■						Aqueous emulsifier and foam stabilizer, prevents splits
	■						Aqueous emulsifier for cellular elastomers
							Strong foam stabilizer, promotes fine even cell structure
							Emulsifier for low-odor foams (urea catalysis), improves open-cell structure
	■						Long pot life, suitable for large volume articles. Good MBOCA substitute
	■				■		Improves heat resistance, compression set & abrasion. Especially apt for TPU
	■				■		Improves heat resistance, compression set & abrasion. Especially apt for TPU
	■	■	■	■	■	■	Excellent extension of material service life, acid scavenger
	■	■	■	■	■	■	Excellent extension of material service life, acid scavenger
	■	■	■	■	■	■	Excellent extension of material service life, liquid, water soluble, high thermal stability
	■						Excellent extension of material service life, solid
							Excellent extension of material service life, solid, high thermal stability
							Non-phthalate plasticizer with high low-temperature flexibility & good compatibility with ester-TPU
					■	■	Non-phthalate plasticizer with high lightfastness and low-temperature flexibility
					■	■	Non-phthalate plasticizer with high saponification resistance
	■	■	■	■	■	■	Exceptionally high purity modifier; improves rebound, set, abrasion, color, mechanics; lowers durometer
	■	■	■	■	■	■	Very low/consistent OH modifier; very low odor & color, very good mechanics, lowers durometer
	■	■	■	■	■	■	Classic grade of DPGDB modifier; provides low durometer with very low exudation
							Non-phthalate polymeric plasticizer with high migration & extraction resistance
							Non-phthalate polymeric plasticizer with lower viscosity compared to Ultramol VII®
					■	■	Bonding agent, improves adhesion of rigid integral skin foam to metal
					■	■	Drying agent for solvent-free polyurethane systems
					■	■	Delays the chemical reaction / crosslinking of isocyanates



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