






# ***Product Manual***

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上海墨梵新材料科技有限公司  
MOFAN POLYURETHANE CO.LTD.

# MOFAN Polyurethane Additives



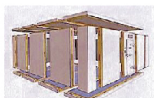
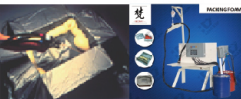
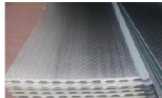


Application	Grade	Key performance feature	Equal or Similar to		
 <p>Home-appliances</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22	
		MOFAN 5	Strong urea reaction, blowing amine catalyst,improving flowability	Polycat 5,Niax C-5,Jeffcat PMDETA	
		MOFAN 8	Widely applicable urethane reaction, gelling amine catalyst	Polycat 8,Niax C-8,Jeffcat DMCHA	
		MOFAN BDMA	Improve foam brittleness and adhesion	Dabco BDMA,Jeffcat BDMA	
		MOFAN 46	Standard potassium acetate-based trimerisation catalyst,fast curing to shorten demould time	Polycat 46	
		MOFAN 41	Moderately active curing amine catalyst with excellent gelling capability,fast curing to shorten demould time	Polycat 41, Niax C-41,Jeffcat TR-90	
		MOFAN TMR-2	Quarternary ammonium-based, delayed action trimerization & fast curing catalyst.	Dabco TMR-2	
Silicon surfactants	SI-3665	Improves surface finish and flow around obstructions for HC-blown systems.			
	SI-3635	Improves energy efficiency for HFC/HFO or HFO/HC co-blown formulations.			
 <p>Continuous panel Discontinuous panel Block foam</p>	Catalysts	MOFAN 5	Strong urea reaction, blowing amine catalyst	Polycat 5,Niax C-5,Jeffcat PMDETA	
		MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22	
		MOFAN 8	Widely applicable urethane reaction, gelling amine catalyst	Polycat 8,Niax C-8,Jeffcat DMCHA	
		MOFAN 41	Moderately active curing amine catalyst with excellent gelling capability.Recommended for use as a co-catalyst.	Polycat 41, Niax C-41,Jeffcat TR-90	
		MOFAN TMR-2	Quarternary ammonium-based, delayed action trimerization & fast curing catalyst.	Dabco TMR-2	
		MOFAN TMR-3	Quarternary ammonium-based, strongly delayed action trimerization catalyst.	Dabco TMR-3	
		MOFAN BDMA	Improve foam brittleness and adhesion	Dabco BDMA,Jeffcat BDMA	
		MOFAN 46	Standard potassium acetate-based trimerisation catalyst	Polycat 46	
		MOFAN 42	Fast curing & trimerisation catalyst,and delayed gelling for polyester system.Recommended for B2 Class foam	Featured products	
		MOFAN 43	Fast curing & trimerisation catalyst,and delayed gelling for polyester system.Recommended for B1 Class foam	Featured products	
		MOFAN L90	Delayed gelling for polyester system,In order to establish a new balance.	Featured products	
		MOFAN 15	Standard potassium octoate-based trimerization catalyst.	Dabco K-15	
Silicon surfactants	SI-3633	Improved surface quality for HC-blown PIR system (MDI compatible).			
	SI-3618	Promotes smooth and uniform surface quality for 100% polyester polyols and high index formulation			
	SI-5716	Nonhydrolytic surfactant with cell-open action ,apply of cell open foam and PIR foam	L6816		
 <p>Spray foam</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22	
		MOFAN 5	Strong urea reaction, blowing amine catalyst	Polycat 5,Niax C-5,Jeffcat PMDETA	
		MOFAN 9	Low odor, non-reactive amine with balanced urethane/urea reaction bias.Can be used as a co-catalyst with strong blow and gel amine catalysts to balance the reaction and provide a smooth rise profile.	Polycat 9	
		MOFAN41	Moderately active curing amine catalyst with excellent gelling capability.Recommended for use as a co-catalyst.	Polycat 41, Niax C-41,Jeffcat TR-90	
		MOFAN TMR-2	Quarternary ammonium-based, delayed action trimerization & fast curing catalyst.	Dabco TMR-2	
		MOFAN TMR-30	Amine-based, delayed action gelation/trimerization catalyst.	Dabco TMR-30	
		MOFAN BDMA	Improve foam brittleness and adhesion	Dabco BDMA,Jeffcat BDMA	
		MOFAN T12	Strong urethane reaction (gelation) catalyst with good resin-side hydrolytic stability	Dabco T12, Niax D-22	
		MOFAN 46	Standard potassium acetate-based trimerisation catalyst	Polycat 46	
MOFAN 15	Standard potassium octoate-based trimerization catalyst.	Dabco K-15			
Silicon surfactants	SI-3609	Industry standard rigid foam surfactant. Provides excellent flammability performance in rigid foams.	AK-8806		
	SI-6931	Surfactant providing improved FR for use with water, HFCs, and HFOs.	AK-8804		
 <p>Package foam</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22	
		MOFAN 5	Strong urea reaction, blowing amine catalyst	Polycat 5,Niax C-5,Jeffcat PMDETA	
		MOFAN 9	Low odor, non-reactive amine with balanced urethane/urea reaction bias.Can be used as a co-catalyst with strong blow and gel amine catalysts to balance the reaction and provide a smooth rise profile.	Polycat 9	
		MOFANCAT T	Robust reactive amine which is more selective to the urea (blowing) reaction catalysis. It can be used in flexible and rigid polyurethane systems where a smooth blowing profile is required. Non-emissive.	Dabco T, Jeffcat Z-110	
		MOFAN DMAEE	Low odor surface curing catalyst, used with 33LV and other major base catalysts	Dabco DMAEE,Jeffcat ZR-70	
		Silicon surfactants	SI-3908	Nonhydrolytic surfactant	
SI-8872	Nonhydrolytic surfactant				
 <p>Decoration &amp; Wood-imitation</p>	Catalysts	MOFAN 5	Strong urea reaction, blowing amine catalyst	Polycat 5,Niax C-5,Jeffcat PMDETA	
		MOFAN 9	low orodor catalyst, can replace DMCHA	Polycat 9	
		MOFAN41	Moderately active curing amine catalyst with excellent gelling capability.Recommended for use as a co-catalyst.	Polycat 41, Niax C-41,Jeffcat TR-90	
		MOFAN 46	Standard potassium acetate-based trimerisation catalyst	Polycat 46	
		MOFAN 33LV	Standard gel catalyst based on Triethylenediamine in DPG	Dabco 33LV,Niax A-33,Jeffcat TD-33A	
Silicon surfactants	SI-1605	Reduce pore and improve surface smoothness			
 <p>One component foam</p>	Catalysts	MOFAN DMDEE	Suitable for single component sealing foam, and MDI phase dissolution without reaction	Dabco DMDEE,Jeffcat DMDEE	
		Silicon surfactants	SI-3973	Moderate cell opener providing good surface and adhesion.	B-8871
			SI-3972	Nonhydrolytic surfactant with cell-open action.	




Application		Grade	Key performance feature	Equal or Similar to
 <p>Flexible foam</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22
		MOFAN 33LV	Standard gel catalyst based on Triethylenediamine in DPG	Dabco 33LV,Niax A-33,Jeffcat TD-33A
		MOFAN DPA	Low odor reactive gel catalyst is mainly used to prepare polyurethane foam with high odor requirement	Jeffcat DPA
		MOFAN DMEA	Moderately active blowing catalyst with broad processing latitude	Dabco DMEA, Jeffcat DMEA
		MOFAN SMP	Well-balanced catalyst with broad processing latitude, especially for low densities, providing additional hardening effect	TEGOAMIN® SMP
		MOFAN T9	Stannous octoate	Dabco T-9,Niax D-19
		MOFAN T12	Strong urethane reaction (gelation) catalyst with good resin-side hydrolytic stability	Dabco T-12,Niax D-22
Silicon surfactants	SI-560	High potent stabilizer for foams with physical blowing agent.	L-580	
	SI-550	Broad processing latitude and fine cell structure.	L-618	
 <p>HR foam</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22
		MOFAN 33LV	Standard gel catalyst based on Triethylenediamine in DPG	Dabco 33LV,Niax A-33,Jeffcat TD-33A
		MOFAN T12	Strong urethane reaction (gelation) catalyst with good resin-side hydrolytic stability	Dabco T-12,Niax D-22
		MOFAN DPA	Low odor reactive gel catalyst is mainly used to prepare polyurethane foam with high odor requirement	Jeffcat DPA
		MOFAN 77	Balanced gelation and blowing catalyst that can promote open cells in some applications.	Polycat 77,Jeffcat ZR-40
		MOFAN 15A	Isocyanate-reactive, balanced urethane/urea reaction catalyst. Promotes surface cure.	Polycat 15
		MOFAN A300	Non-emissive reactive blowing catalyst	Dabco NE300
	Hardened agent	MOFAN 109	High efficiency crosslinking agent, reduce POP dosage and maintain high hardness	Featured products
	Silicon surfactants	SI-8001	High efficiency silicone for MDI or MDI/TDI HR molded foam	
		SI-80366	Works well in all types of HR systems,including of polyester polyol based formulation	
	Cell opener	MOFAN 1421	Cell opener	Voranol 1421
MOFAN 28		Cell opener	Featured products	
Eliminate formaldehyde agent	MOFAN 575	Eliminate 80%~85% formaldehyde and acetaldehyde of Polyol component	Featured products	
 <p>Viscoelastic foam</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22
		MOFAN 33LV	Standard gel catalyst based on Triethylenediamine in DPG	Dabco 33LV,Niax A-33,Jeffcat TD-33A
		MOFAN DPA	Low odor reactive gel catalyst is mainly used to prepare polyurethane foam with high odor requirement	Jeffcat DPA
		MOFAN T9	Stannous octoate	Dabco T-9,Niax D-19
		MOFAN T12	Strong urethane reaction (gelation) catalyst with good resin-side hydrolytic stability	Dabco T-12,Niax D-22
		MOFAN A300	Non-emissive reactive blowing catalyst	Dabco NE300
	Cell opener	MOFAN 1300	Cell opener	Featured products
	Hardened agent	MOFAN 109	High efficiency crosslinking agent, reduce POP dosage and maintain high hardness	Featured products
	Silicon surfactants	SI-8002	Improve frothing stability in low density viscoelastic foam (D30-D40) with broad formulation latitude.	B-8002
		SI-5825	Low potency silicone, provide open cell structure for viscoelastic molded foam	
		SI-5782	High potency silicone for viscoelastic molded foam	
 <p>Footwear</p>	Catalysts	MOFAN EG	Industry standard gel catalyst for MEG extended systems	Dabco EG,Niax A-533
		MOFAN 25S	Industry standard gel catalyst for BDO extended systems	Dabco 25S,
		MOFAN A-1	Industry standard blowing catalyst to improve foam flowability especially in low density applications	Dabco BL-11,Niax A-1,Jeffcat ZF-22
		MOFAN 1027	Delayed action co-catalyst for MEG extended systems giving improved flowability and/or faster demold	Dabco 1027
		MOFAN 1028	Delayed action co-catalyst for BDO extended systems for improved flowability and/or faster demold	Dabco 1028
		MOFAN 1029	Delayed action co-catalyst for MEG extended systems giving improved flowability	Dabco 1029
	Silicon surfactants	SI-693	Potent cell regulator providing fine and uniform cell structure; improves tensile strength and Ross-Flex properties	DC-193
 <p>Integral skin foam</p>	Catalysts	MOFAN A-1	Standard blowing catalyst based on Bis(2-dimethylaminoethyl)ether in DPG,improving flowability	Dabco BL-11,Niax A-1,Jeffcat ZF-22
		MOFAN 33LV	Standard gel catalyst based on Triethylenediamine in DPG	Dabco 33LV,Niax A-33,Jeffcat TD-33A
		MOFAN 8054	Delayed action co-catalyst for full-water blowing agent application	Featured products
	Silicon surfactants	SI-5306	Excellent cell opening & Good surface performance	DC 2525



## System House for rigid foam

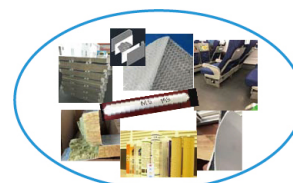
Grade	OH Value	Viscosity	Ratio POL/ISO	CT(S)	CT(S)	TFT(S)	FRD kg/m <sup>3</sup>	Application
	mgKOH/g	25 °C, cps						
Pentane-based blended polyols								
MPF-0151	370±50	3000±1000	1/1.2	12±5	80±15	120±30	25.0±1	 Home-appliances
MPF-0351	350±50	2000±500	1/1.1~1.9	12±5	55±10	65±20	35.0±5	 Continuous Panels
MPF-0651	400±50	2000±500	1/1.6~1.8	40±5	150±30	-	30±2	 Discontinuous Panels
Water-based blended polyols								
MPF-0101	150±50	1200±500	1/1	10±2	-	25±5	10±2	 Packing Foam
MPF-0301	380±50	1000±300	1/1.6	12±5	50±10	65±20	19.0±1	 Roof Panel
MPF-0501	300±50	300±150	1/1.08	4±2	12±4	16±6	30.0±3	 Spray Foam
MPF-0601	350±50	550±50	1/1.6~1.8	40±5	165±5	-	33±2	 Pipe insulation

## System House for High resilience foam & Modified MDI

Grade	OH Value	Viscosity	Ratio POL/ISO	CT(S)	CT(S)	TFT(S)	FRD kg/m <sup>3</sup>	Application
	mgKOH/g	25 °C, cps						
Molded high resilience foam								 Office Cushion, Car Seating
MPF-801	-	900±100	100/60~80	16±2	-	78±10	41±2	
Modified MDI								
Grade	Appearance	Viscosity mpa.s@25 °C	NCO %	Application				
MF-6135	Light yellow viscous liquid	45~95	28.5~29.5	Molded high resilience foam				
MF-8122	Light yellow viscous liquid	15~35	32~33	Block viscoelastic foam, High resilience foam				
MF-8215	Light yellow viscous liquid	150~300	25.5~26.5	Molded viscoelastic foam, Molded high resilience foam				



## ► Polyether Polyols for PU Adhesives & Sealants







Grade	Specification					Application
	OH Value mgKOH/g	Viscosity mpa·S/25°C	Water content %	Functionality	Molecular Weight g/mole	
PF-040	450±30	360±100	≤0.05	3	375	Adhesives /Spray foam/Cross-linking agent
PF-450	380±15	330±30	≤0.05	3	450	Coatings/Floorings/Structural castings/Adhesives
PF-1050	170±10	250±50	≤0.05	3	1000	Coatings/Floorings/Structural castings/Adhesives
PF-2080	14±1.5	3000±500	≤0.05	2	8000	Adhesives /Sealantss/Elastomers
PF-2120	9.5±1.5	6000±2000	≤0.05	2	12000	Adhesives /Sealantss/Elastomers

## ► Hidrophillic Polyols

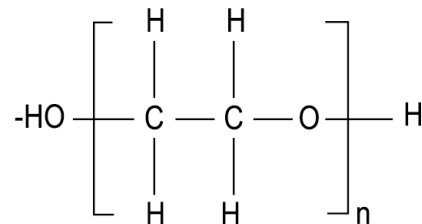
Grade	Specification							Application
	OH Value mgKOH/g	Viscosity mpa·S/25°C	Acid Value mgKOH/g	Water content %	Color APHA	Functionality	Molecular Weight g/mole	
PF-3500	35±2	1200±300	≤0.08	≤0.05	≤50	3	5000	Soft and hypersoft flexible slabstock foams/Cell opener/Viscoelastic foams
PF-3500N	35±2	1300±150	≤0.08	≤0.05	≤50	3	5000	Soft and hypersoft flexible slabstock foams/Cell opener/Viscoelastic foams/Latex mattresses
PF-010	22±1	2200±300	≤0.08	≤0.05	≤50	3	8000	Modified MDI/Hidrophillic polyuerthanes
PF-490	19±3	5500±1500	≤0.08	≤0.05	≤50	4	12000	Waterproof/Grouting/Hidrophillic polyuerthanes
PF-480	20±4	1700±500	≤0.08	≤0.05	≤50	4	11000	Waterproof/Grouting/Hidrophillic polyuerthanes

## ► Special Polyols

Grade	Specification								Key performance feature	Application
	OH Value mgKOH/g	Viscosity mpa·S/25°C	Acid Value mgKOH/g	Water content %	Color APHA	Functionality	Molecular Weight g/mole			
PF-2802	28±1.5	800±200	≤0.05	≤0.05	≤50	2	4000	High reactive, Improve tear strength	 Shoe soles	
PF-Y950	950±50	6750±750	≤0.05	≤0.05	≤50	3	180	High mechanical strength	 Composite Material	
PF-3075	750±20		≤0.05	≤0.05	≤50	3	220	High mechanical strength		
PF-628	28±2	1600±200	≤0.05	≤0.05	≤50	6	12000	High rebound & comfort	 HR slabstock foam/latex mattresses	
PF-R800	800±30	17000±2500	≤0.05	≤0.05	≤50	4	280	auto-catalytic fastreactive	 Rigid foam/Adhesive/casting	

## ▶ PEG Series

PEG series products vary from colorless and transparent liquid to white solid in terms of molecular weight, with water solubility and low toxicity. The hydroxyl value at both ends of PEG molecular structure is low alcohol and can be used for esterification and etherification. PEG with lower relative molecular weight can be used as solvent, cosolvent, O/W emulsifier and stability. Also used as water-soluble ointment matrix and suppository matrix; It can also be used to make cement suspension agent, emulsifier and injection. PEG with higher relative molecular weight is commonly used to increase the viscosity and solidification of liquids, as well as to extricate other drugs. Used as the carrier of solid dispersant to achieve the purpose of solid dispersion; Used as lubricant and coolant in rubber and metal processing industry; It is used as antistatic agent and lubricant in textile industry.



Grade	Specification					
	OH Value mgKOH/g	K <sup>+</sup> ≤ppm	Appearance	Functionality	Molecular Weight g/mole	Application
PEG1000	105-120	5	Solid	2	1000	Leather resin (waterproof and breathable)
PEG2000	54.5-57.5	5	Solid	2	2000	Leather resin, water-borne PU
PEG3000	32-35	5	Solid	2	3000	Leather resin (waterproof and breathable)
PEG6000	18-19	5	Solid	2	6000	Leather resin (waterproof and breathable)
PEG10000	10.2-12.5	5	Powder	2	10000	High end rubber, carbon black dispersing agent
PEG20000	5-6.2	5	Powder	2	20000	High end rubber, carbon black dispersing agent

*Remark: Based on the continuous improvement, the manufacturer reserves the right to amend the specifications without prior notification. The pictures and the data in the product manuals just for reference. If there is any fluctuation, please according to the real object*



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