

Since 1991



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GROUP

**ENRICHING PERFECTION
THROUGH INNOVATION**

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ATHEROL – NATURAL OIL BASED HIGH PERFORMANCE DRIVEN POLYOLS

HIGH PERFORMANCE POLYOLS FOR 2K PU BASED SYSTEMS BASED ON NATURAL OIL. **ATHEROL BY ATHER POLYURETHANE**

Our atherol series is a range of green polyols which has been designed for the use in coating, adhesives, sealants and elastomer (CASE). Atherol series will help you comply with high environmental standards whilst providing the best of all performance.

HOW THE GREENER PROFILE YOU ASK?

Atherol series is based on natural renewable sources. They also have a very distinct hydrophobic character. For this reason, oleochemical polyols create significantly less CO₂ as a result of the side reaction of the curing agents.

Atherol polyols are polyfunctional alcohols based on renewable raw materials like, castor oil and soybean oil. The practical advantages of these products include good adhesion, excellent workability and good weathering properties. They can also be used on a wide variety of different substrates. In high humidity and high temperature conditions, these special polyols are able to create networks without bubbles or foam formation. Besides good hydrophobicity, polyols based on oleochemicals exhibit excellent hydrolysis resistance, chemical resistance and UV resistance, as well as low viscosity. Low viscosity enables wide acceptance in spraying applications. Atherol series has 100% solid content along with high gloss and pigment wetting properties, these perks enable us to serve in applications such as concrete flooring, wind blades, pipeline coatings, protective coatings and adhesives.

BIO - POLYOLS

GRADE	TYPE	OH CONTENT	OH EQUIVALENT WT	VISCOSITY mPas	APPLICATIONS / CHARACTERISTICS
ATHEROL 100	Polyester Diol	70	801	6000	<ul style="list-style-type: none"> • Co-polyol for performance driven PU coatings (e.g. sports floor) • Elastomers and sealants • Good hydrolysis stability • Soft elastic performance
ATHEROL 114	Branched Polyester polyether	260	240	2500	<ul style="list-style-type: none"> • Low viscosity universal polyol • Binder for pigment pastes • Crack-bridging floorings • Good chemical resistance • Hydrophobic • Good elastic memory effect
ATHEROL 115	Branched Polyester polyether	165	330	4000	<ul style="list-style-type: none"> • Universal polyol. • Excellent impact resistance • Shore D hardness (D~70)
ATHEROL 116	Branched Polyester polyether	260	240	2500	<ul style="list-style-type: none"> • Rapid curing applications such as Polyurea coating.
ATHEROL 500	Branched Polyester polyether	280	225	700	<ul style="list-style-type: none"> • low viscosity universal polyol extremely hydrophobic. • Good self-leveling properties excellent flexibility at temperatures below 0 °C • Good bonding properties
ATHEROL 750 M	Emulsion polyol	-	-	300	<ul style="list-style-type: none"> • Cementitious polyurethane floor coating
ATHEROL 9950	Branched Polyester polyether	270	207	1500	<ul style="list-style-type: none"> • Flexibility is achieved when blended with other atherols
ATHEROL 1000	Polyester Polyether	155.16	320	1000	<ul style="list-style-type: none"> • Medium viscosity flexible polyol • Longer pot life • Highly recommended

Our State-of-the-Art Laboratory and highly inspiring R&D team enables us to deliver tailor made Bio-Polyols with variable hydroxyl content, viscosity and Molecular weight according to your specifications.

1K MOISTURE CURE SYSTEMS

Single component moisture cure systems are isocyanate-based Polyurethanes which cures in presence of humidity / moisture in atmosphere. Purnima group offers systems for applications which finds their use in various industries. our ambitious and resilient R&D team has solution to every obstacle which allows us to tailor make any system according to your needs and specification.

GRADE*	DESCRIPTION
ATHESIVE 1015	<ul style="list-style-type: none">• Universal binder for adhesives for all substrates
ATHESIVE 1016	<ul style="list-style-type: none">• Binder for rubber crumps, foam and scrap foam
ATHOJET 1K 909	<ul style="list-style-type: none">• Useful in immediate sealing of heavy water leakage by expanding the foam 4000% and provides hydrophobic foam which in turn gives better water proofing.
ATHOJET 1K 606	<ul style="list-style-type: none">• Useful for normal water leakage. Provides hydrophobic foam which expands 2700%.
ATHOJET 2K 909	<ul style="list-style-type: none">• Provides elastic sealing with hardness of shore A 50 – 60. Used for sealing after foam and can also be used for crack filling.

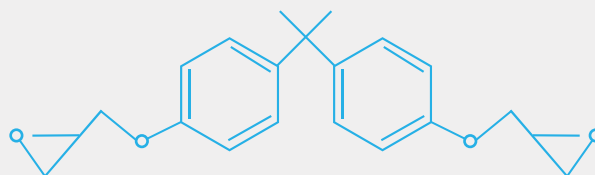
*Can be tailored made as per requirement.




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BISPHENOL-A BASED LIQUID EPOXY RESINS

Purnima group offers modified and unmodified bisphenol-A based epoxy resins in various viscosities. These resins are widely used in Adhesives, coatings, construction, electrical and composites



Diglycidyl ether of Bisphenol-A (DGEBA)


GRADE	VISCOSITY ¹	EEW ²	COLOUR ³	RECOMMENDATIONS
	mPas			
PGR 811	11000 – 14000	185 – 194	0.5 MAX	A standard viscosity, unmodified liquid epoxy resin for multiple applications.
PGR 87	450 – 800*	224 – 280	MAX 2	A semi solid resin for adhesives and prepegs
 PGR 8811	10000 – 13000	186 – 200	0.5 MAX	Standard water reducible liquid epoxy resin. Can be diluted up to 40%. Give good adhesion on damp surfaces
PGR 847	450 – 650	177 – 187	1 MAX	A liquid epoxy resin modified with glycidyl ether of phenol recommended for high gloss, heavy duty flooring, solvent free coatings, grouts, mortars and crack filling applications
PGR 8131	500 – 1000	196 – 204	1 MAX	A Low viscosity epoxy resin which enables for higher filler loading and mainly used for top coat floorings
PGR 8136	1800 – 2400	192 – 204	1 MAX	Epoxy resin mainly used with PG H-6236. Recommended for small artworks and coatings.
PGR 8193	600 – 1200	181 – 193	1 MAX	Epoxy resin mainly used with PG H-6293. Recommended for artworks and table tops upto 10 mm thickness
PGR 8084	400 – 800	208 – 218	1 MAX	Epoxy resin mainly used with PG H-6085. Recommended for artworks or coatings which need faster production.

*70% Solution In Butyl Carbitol

¹Brookfield viscosity- ASTM D2196

²all values in g/eq - ASTM D1652

³all values in gardener scale- ASTM D1544

 Water reducible



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REACTIVE DILUENTS

Reactive diluents are used to reduce viscosity of epoxy resins whilst maintaining epoxy value. Reactive diluents are epoxy Group containing functional products that can react with the curing agents to become part of a cross linked system. Each different reactive diluent optimizes the performance properties such as adhesion, flexibility, filler loading, impact strength, solvent resistance and electrical resistance in its own way of mechanism.

PG-D series reactive diluents are mainly classified in three groups- aliphatic, aromatic and cycloaliphatic. They can be further classified as mono functional, di functional and tri functional.

● MONO FUNCTIONAL ALIPHATIC ●

GRADE	VISCOSITY ¹	EEW ²	COLOUR ³	FEATURES	STRUCTURE
	mPas		APHA		
PG D 4002	5 – 12	270 – 312	100 MAX	<ul style="list-style-type: none"> Based on C12 –C14 alcohol. Excellent wetting & flexibility Recommended for epoxy flooring & coating applications 	
PG D 4012	MAX 2	135 – 163	100 MAX	<ul style="list-style-type: none"> Based on n-butanol Offers highest viscosity cutting power due to extremely low viscosity 	
PG D 4013	2 – 10	215 – 230	100 MAX	<ul style="list-style-type: none"> Based on 2-Ethyl hexanol Increases Pot life 	

● DI FUNCTIONAL ALIPHATIC ●

GRADE	VISCOSITY ¹	EEW ²	COLOUR ³	FEATURES	STRUCTURE
	mPas		APHA		
PG D 4003	12 – 22	128 – 145	100 MAX	<ul style="list-style-type: none"> Based on 1,4 butanediol Used in construction and composite applications. 	
PG D 4004	15 – 25	145 – 161	100 MAX	<ul style="list-style-type: none"> Based on 1,6 hexanediol Used in construction, coating and composite applications 	
PG D 4005	47 – 70	314 – 363	100 MAX	<ul style="list-style-type: none"> Based on Polypropylene glycol Imparts flexibility 	
PG D 4006	18 – 25	141 – 160	100 MAX	<ul style="list-style-type: none"> Based on Neopentyl glycol Good property retention 	
PG D 4014	20 – 50	161 – 192	100 MAX	<ul style="list-style-type: none"> Based on Dipropylene glycol Improves impact strength and elongation 	
PG D 4015	60 – 90	165 – 185	100 MAX	<ul style="list-style-type: none"> Based on 1,4 cyclohexane dimethanol Provides excellent UV resistance. 	
PG D 4016	60 – 110	270 – 300	200 MAX	<ul style="list-style-type: none"> Based on polyethylene glycol Soluble in water 	
PG D 4017	300 – 800	350 – 450	8G MAX*	<ul style="list-style-type: none"> Ester based on dimer acid Improves toughness and flexibility 	-

REACTIVE DILUENTS

● TRI FUNCTIONAL ALIPHATIC ●

GRADE	VISCOSITY ¹	EEW ²	COLOUR ³	FEATURES	STRUCTURE
	mPas		APHA		
PG D 4007	100 - 250	130 - 150	100 MAX	<ul style="list-style-type: none"> Based on Trimethylol propane Used in construction and composite applications. 	
PG D 4011	250 - 500	500 - 649	8 G MAX*	<ul style="list-style-type: none"> Based on Castor oil Used for concrete patching, floor coating and thermal shock resistant potting 	

● MONO FUNCTIONAL AROMATIC ●

GRADE	VISCOSITY ¹	EEW ²	COLOUR ³	FEATURES	STRUCTURE
	mPas		APHA		
PG D 4001	6 - 12	155 - 170	2.0 G MAX*	<ul style="list-style-type: none"> Based on Phenol Used in electrical formulations 	
PG D 4008	5 - 10	175 - 190	100 MAX	<ul style="list-style-type: none"> Based on O-cresol Offers high gloss and mechanical strength Recommended in flooring and electrical formulations. 	
PG D 4009	20 - 35	208 - 244	100 MAX	<ul style="list-style-type: none"> Based on P-tertiary butyl phenyl Offers good chemical resistance 	
PG D 4010	40 - 60	400 - 555	10 G MAX*	<ul style="list-style-type: none"> Based on Cardanol Used for coatings, adhesives, construction and electrical applications 	

¹Brookfield viscosity- ASTM D2196

²all values in g\eq - ASTM D1652

³all values in APHA scale- ASTM D1209

*all values in gardener scale- ASTM D1544

Water Soluble

CURING AGENTS

● POLYAMIDE CURING AGENT ●

Polyamide curing agent is a reaction product of dimer acid and polyamine. These curing agents can be blended with epoxy resins in a variety of mixing ratios. Good chemical resistance, film forming character, high gloss and excellent adhesion make them suitable for coating and adhesive applications. Purnima group offer various curing agents under this category with varying viscosities and reactivity.

GRADE	COLOUR ¹	VISCOSITY ²	AMINE VALUE ³	POT LIFE ⁴	AHEW	MIXING RATIO ⁵	RECOMMENDATIONS
		mPas		Mins	g/eq		
PG H 6714	8 MAX	300 - 900	350 - 400	110 - 150	95	50	A low viscosity polyamide curing agent recommended for grouts, crack injection, primers, protective coatings, tile gap filling, mortars and adhesives.
PG H 6714 IN	9 MAX	300 - 900	350 - 400	60 - 100	95	50	A low viscosity polyamide curing agent recommended for grouts, crack injection, primers, protective coatings, tile gap filling, mortars and adhesives.
PG H 6713	9 MAX	10000 - 16000	350 - 400	80 - 120	95	50	A moderate viscosity polyamide curing agent recommended for high solids coatings, primers, grouts, mortars, adhesives, marine and industrial paints.
PG H 6713 IN	9 MAX	10000 - 18000	350 - 400	50 - 90	95	50	A moderate viscosity polyamide curing agent recommended for high solids coatings, primers, grouts, mortars, adhesives, marine and industrial paints
PG H 6712	9 MAX	35000 - 55000	280 - 320	80 - 110	105 - 124	55 - 65	A high viscosity polyamide curing agent recommended for protective coatings, adhesives, flooring, marine coatings and industrial paints.
PG H 6711	9 MAX	45000 - 65000 @40°C	210 - 230	-	190 - 238	100 - 125	A high viscosity polyamide curing agent recommended for adhesives, sealants and anti-corrosive coatings

¹all values in gardener scale- ASTM D1544

²Brookfield viscosity- ASTM D2196

³all values in mg KOH/gm- ASTM D2074

⁴100gms mass mixed in a cup with PG R-811 (EEW:190)- ASTM D-2471

⁵with liquid epoxy resin PG R-811(EEW:190)

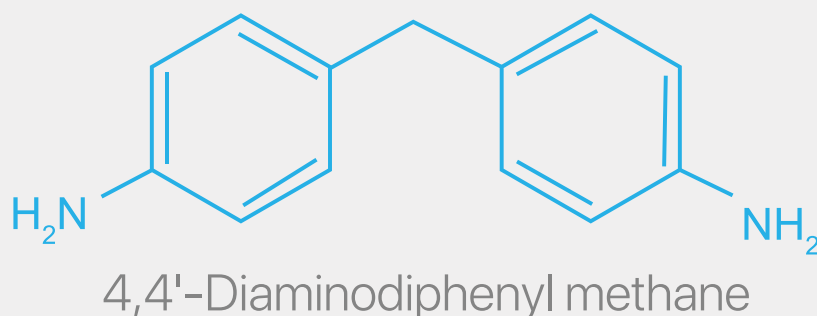


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CURING AGENTS

● AROMATIC AMINE CURING AGENTS ●

Curing agents such as aromatic amine are available in solid and liquid forms and are modified to cure epoxy resins at ambient conditions as well. Higher thermal stability and chemical resistance along with excellent mechanical properties are specific advantages of these curing agents. Purnima group offers a wide range of aromatic amine curing agents for various applications.



GRADE	COLOUR	VISCOSITY ¹	AMINE VALUE ²	POT LIFE ³	AHEW	MIXING RATIO ⁴	RECOMMENDATIONS
		mPas		Mins	g/eq		
PG H 65	WHITE TO TAN PASTILLES	-	-	-	49.5	26	A pure aromatic amine curing agent- 4,4'-Diaminodiphenyl methane recommended to cure epoxy resins at elevated temperatures
PG H 641	BROWN LIQUID	3500 - 5500	260 - 290	8 - 10 HRS	114.0	60	A low viscosity aromatic amine curing agent to be used along with curing agent PG H-642 for high chemical resistant industrial flooring, coatings and chemical resistant tank linings
PG H 642	DARK BROWN LIQUID	15500 - 22000	245 - 270	20 - 40	114.0	60	An aromatic amine curing agent with high reactivity to be used along with curing agent PG H-641
PG H 649	BROWN LIQUID	230 - 280	260 - 280	110 - 150	114.0	60	A low viscosity aromatic amine curing agent with moderate reactivity recommended to achieve high chemical resistance in flooring, coatings and tank linings

¹Brookfield viscosity- ASTM D2196

²all values in mg KOH/gm- ASTM D2074

³100gms mass mixed in a cup with PG R-811 (EEW:190)- ASTM D-2471

⁴with liquid epoxy resin PG R-811(EEW:190)



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CURING AGENTS

●ALIPHATIC CURING AGENTS●

Aliphatic amines are low in viscosity and are preferred curing agents at ambient conditions for general applications. They offer excellent combinations of properties and are used in adhesives, coatings, composites and construction applications. PURNIMA GROUP offers several grades of aliphatic amine curing agents with varying viscosities, reactivity and performance properties after optimum curing

GRADE	COLOUR ¹	VISCOSITY ²	AMINE VALUE ³	POT LIFE ⁴	AHEW	MIXING RATIO ⁵	RECOMMENDATIONS
		mPas		Mins	g/eq		
PG H 6666	MAX 1	5 - 20	-	25 - 35	-	-	It is a modified polyamine recommended for adhesives, castings, coatings, construction and composite applications
PG H 6006	MAX 3	-	-	30 - 40	19.0	10 - 12	An unmodified aliphatic polyamine recommended for adhesives, castings, coatings, construction and composite applications
PG H 6007	MAX 1	5 - 10	1600 - 1650	15 - 30	21.0	8	An unmodified aliphatic polyamine recommended for adhesives, castings, coatings and composite applications
PG H 6958	MAX 4	150 - 300	900 - 1000	20 - 30	34.0	18	A modified polyamine curing agent with low vapour pressure and high reactivity recommended for adhesives, composites, castings and coating applications
PG H 652	-	3000 - 3500	780 - 830	-	42.0	20-22	A modified polyamine curing agent with low vapour pressure and high reactivity recommended for adhesives, composites, castings and coating applications

¹all Values In Gardener Scale- ASTM D1544

²brookfield Viscosity- ASTM D2196

³all Values In Mg Koh/gm- ASTM D2074

⁴100gms Mass Mixed In A Cup With PG R-811 (EEW:190)- ASTM D-2471

⁵with Liquid Epoxy Resin PG R-811(EEW:190)



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CURING AGENTS

● CYCLOALIPHATIC CURING AGENTS ●

Cycloaliphatic amine curing agents offer low colour and viscosity. They are widely used in adhesives, coatings, composites and self-levelling flooring

GRADE	COLOUR ¹	VISCOSITY ²	AMINE VALUE ³	POT LIFE ⁴	AHEW	MIXING RATIO ⁵	RECOMMENDATIONS
		mPas		Mins	g/eq		
PGH 66002	MAX 1	10 - 20	-	90 - 120	42.6	23	An unmodified low viscosity cyclo aliphatic amine curing agent for coatings, composite applications and flooring.
PGH 6091 DP	MAX 1	130 - 180	310 - 330	50 - 60	-	50	low viscosity modified cyclo aliphatic polyamine mainly used for top coats
PGH 6091	MAX 1	130 - 180	310 - 330	30 - 40	-	50	low viscosity modified cyclo aliphatic polyamine mainly used for top coats
PGH 6236	MAX 1	50 - 100	340 - 360	30 - 45	78	40 - 60	low viscosity modified cyclo aliphatic polyamine mixed with PG R-8136 epoxy resin mainly used for coatings and small art works.
PGH 6293	MAX 1	15 - 50	-	40 - 60	-	33	low viscosity modified cycloaliphatic polyamine mixed with PG R-8193 epoxy resin mainly used for coatings and table tops with medium thickness upto 10mm
PGH 6270	MAX 1	02 - 20	450 - 490	150 - 180	-	33	low viscosity modified cyclo aliphatic polyamine mixed with PGR-8170 epoxy resin mainly used forcoatings and table tops with higher thickness upto 20mm
PGH 6085	MAX 2	1000 - 1500	380 - 410	7 - 15	-	33	low viscosity modified cyclo aliphatic polyamine mixed with PG R-9055 epoxy resin mainly used for coatings which need fast production

¹all values in gardener scale- ASTM D1544

²Brookfield viscosity- ASTM D2196

³all values in mg KOH/gm- ASTM D2074

⁴100gms mass mixed in a cup with PG R-811 (EEW:190)- ASTM D-2471

⁵with liquid epoxy resin PG R-811(EEW:190)



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CURING AGENTS

● PHENALKAMINE CURING AGENTS ●

Phenalkamine curing agents are mannich based reaction product of cardanol and polyamine. These curing agents can be blended with epoxy resins in a variety of mixing ratios. Good chemical resistance, fast film forming character, good moisture tolerance, high gloss and excellent adhesion make them suitable for coating and adhesive applications. Unlike other curing agents, Phenalkamines are notoriously known for their performance on damp surfaces. Purnima group offer various curing agents under this category with varying viscosities and reactivity.



GRADE	COLOUR ¹	VISCOSITY ²	AMINE VALUE ³	POT LIFE ⁴	AHEW	MIXING RATIO ⁵	RECOMMENDATIONS
		mPas		Mins	g/eq		
PG H 6197	16 MAX	500 – 1100	190 – 240	15 – 22	179	100	A low viscosity curing agent recommended for flooring, coating and adhesives where fast cure is required
PG H 6011	16 MAX	2500 – 3200	200 – 230	25 – 30	179	100	A low viscosity curing agent recommended for flooring, coating and adhesives where fast cure is required.
PG H 6558	16 MAX	500 – 2000	320 – 360	13 – 20	95	50	A low viscosity curing agent recommended for high solids coatings, primers, grouts, mortars, adhesives, marine and industrial paints.
PG H 6541	16 MAX	20000 – 50000	290 – 330	80 – 90	130	68	A high viscosity curing agent recommended for high solids coatings, primers, grouts, mortars, adhesives, marine and industrial paints.
PG H 6541 LV	16 MAX	2000 – 4000	280 – 320	80 – 100	95	50	A low viscosity curing agent recommended for protective coatings, adhesives, flooring, marine coatings and industrial paints.
PG H 6943	16 MAX	1000 – 2500	470 – 510	40 – 60	82	40	A low viscosity curing agent recommended for adhesives, sealants and anti - corrosive coatings

¹all values in gardener scale- ASTM D1544

²Brookfield viscosity- ASTM D2196

³all values in mg KOH/gm- ASTM D2074

⁴100gms mass mixed in a cup with PG R-811 (EEW:190)- ASTM D-2471

⁵with liquid epoxy resin PG R-811(EEW:190)






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CURING AGENTS

● WATER BORNE CURING AGENTS ●

Water borne curing agents are found to be promising when regular systems fail to give good performance in specific substrate conditions such as wet or damp substrates.

GRADE	COLOUR ¹	VISCOSITY ²	AMINE VALUE ³	POT LIFE ⁴	SOILDS	MIXING RATIO ⁵	RECOMMENDATIONS
		mPas		Mins	%		
 PGH 6801	MAX 9	3500 - 6500	250 - 300	25 - 45	62 ± 3	100	Polyamine based waterborne coatings and primers
 PGH 6802	MAX 9	30000 - 40000	190 - 240	35 - 55	62 ± 3	100	Polyamine based waterborne coatings, primers and adhesives
 PGH 9360	MAX 9	35000 - 60000	135 - 160	70 - 90	51 ± 1	150	Polyamide based waterborne coatings and primers


¹all Values In Gardner Scale- ASTM D1544

²brookfield Viscosity- ASTM D2196

³all Values In Mg Koh/gm- ASTM D2074

⁴100gms Mass Mixed In A Cup With PG R-811 (EEW:190)- ASTM D-2471

⁵with Liquid Water Borne Epoxy Resin PG R-8811(EEW:190)

 Water Borne



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OUR GLOBAL PRESENCE



Head Office

1206, 1207, 1208 Satyamev Eminence, Science City Road,
Sola, Ahmedabad, Gujarat. India 380060

 www.purnimagroup.com  account@epoxypolymers.com



www.purnimagroup.com



+91 7016282420



+91 7929912339