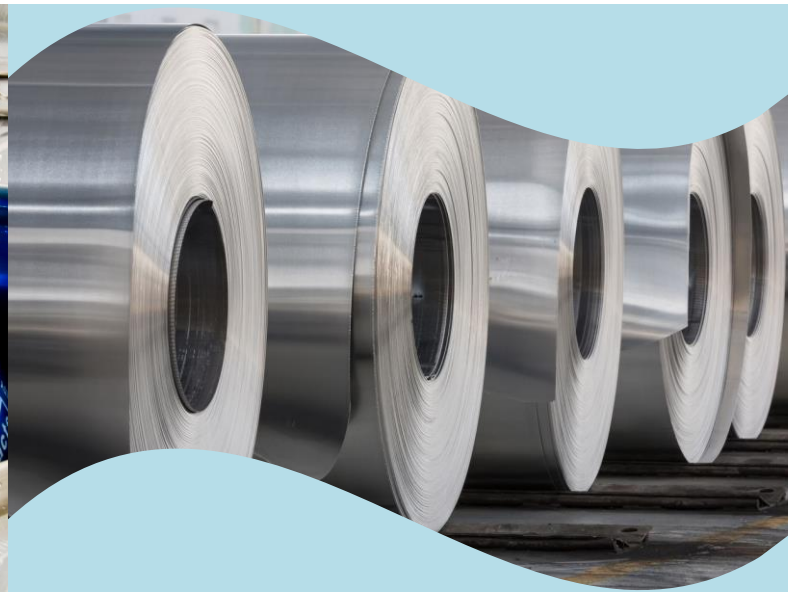


 **VARADUR**
BRANDS OF THE POLYISOCYANATE

 **VARAMIN**
BRANDS OF THE AMINO RESIN

 **VARANOL**
BRANDS OF THE PHENOLIC RESIN



AMINO RESINS



AMINO RESINS

Amino resins are thermosetting resins with excellent tensile strength, hardness and impact resistance. We provide specialized amino resins for use as baking finish curing agents in coating and electronics materials. Amino resins produce coating films with improved hardness and solvent resistance when used in combination with alkyd resins, acrylic resins, polyester resins or epoxy ester resins.

Amino Resins for Coatings

Amino resins are formed when formaldehyde and amino compounds such as melamine, benzoguanamine and urea undergo a condensation reaction and etherification with aliphatic monohydric alcohol.

Melamine Resins

Broad range of usage temperatures.
Excellent weatherability.

Benzoguanamine Resins

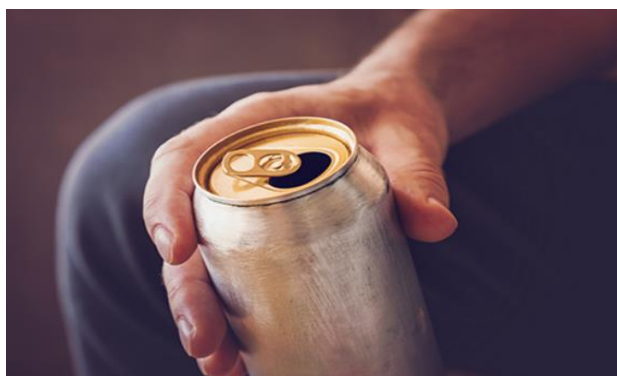
Excellent gloss, compatibility, workability, and adhesion.

Urea Resins

Excellent interlayer adhesion, workability, and adhesion.



Product	Supply Form [%]	Viscosity [mPa.s]/23°C	Main uses and characteristics
BF 908	62 in B	100 – 300	Methylol type, reactive, n- butylated benzoguanamine formaldehyde resin in n-butanol, high flexibility and gloss and therefore suitable for can-, packaging coatings and automotive primers.
BF 992	68 in B	400 – 600	n- butylated benzoguanamine formaldehyde resin in n-butanol, non- plasticized. Medium reactivity benzoguanamine resins, recommended for top quality stoving enamels, excellent gloss, very good compatibility, e.g. can coating and automotive: primer surfacers. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011.
MF 825	65 in B/X	1.000 – 3.000	Imino type, reactive, n-butylated melamine formaldehyde resin. High reactivity melamine formaldehyde resin for general line with very flow and mechanical properties. Good film hardness, body and alkali resistance, für stoving finishes, especially for medium stoving temperature, low cure stoving finishes (80-100°C), addition to air-drying finishes for forced-drying at 80°C, e.g. car body repair finishes, coil coatings, acid curing coatings on wood automotive, base coats and top coat.
MF 890	55 in IB/X	260 – 460	Methylol type, highly reactive, isobutylated melamine formaldehyde resin in isobutanol and xylene, for top quality stoving enamels, General industry: stoving enamels, general purpose, packing coatings and automotive primers and especially (CAB) base coats excellent gloss, very good compatibility.
MF 800	55 in B/IB	260 – 460	Imino type, highly reactive, n-butylated melamine formaldehyde resin in n-/iso-butanol for top quality stoving enamels, automotive OEM primer, base- and clear coats, excellent gloss, very good compatibility.
MF 850	55 in IB	300 – 500	Imino type, highly reactive, isobutylated melamine formaldehyde resin in isobutanol for top quality stoving enamels, Especially for automotive (CAB) base and top coats. Due to high compatibility to medium and long oil alkyds for vehicle refinishing and drum- mirror coatings, printing with excellent gloss.
MF 818	70 in B	700 – 1.200	Imino type, n- butylated melamine formaldehyde resin in n-butanol, very high reactivity melamine formaldehyde resin with very good compatibility, excellent sprayability, good petrol- and acid resistance, high gloss for general line, can coating and automotive with very flow and mechanical properties.
MF 880	80 in B	3.300 – 10.700	Imino type, n- butylated melamine formaldehyde resin in n-butanol, very high reactivity melamine formaldehyde resin with very good compatibility, excellent sprayability, good petrol- and acid resistance, high gloss for general line and automotive with very flow and mechanical properties.
MF 717	84 in B	3.800 – 10.670	Imino type, highly reactive, high solid, methylated melamine formaldehyde resin. MF 717 could be used in various solvent and waterborne stoving enamel paints eg like solventborne & waterborne automotive base & top coats, solvent borne coil, drum and mirror backing coatings.
BF 960	60 in IB/B/X	100 – 300	Methylol type, reactive, n- butylated/isobutylated benzoguanamine formaldehyde resin for can coating and coil coating (backing coat), Very highgloss/gloss retention, excellent sprayability, Wide compatibility with saturated polyesters, excellent pigments wettability, high compatibility with acrylic resins for coil coating.
BG 941	61 in Iso-B/B/X	170 – 240	Methylol type, high reactive, n- butylated benzoguanamine formaldehyde resin in n-butanol and xylene. High reactivity benzoguanamine formaldehyde resin recommended for top quality stoving enamels, e.g. can and coil coatings and also automotive primers, excellent gloss, very good compatibility.
MF 942	70 in B	470 – 500	Methylol type, medium reactive, n- butylated benzoguanamine formaldehyde resin in n-butanol. Medium reactive BF 942/70B resin to be used, in combination with polyesters, acrylics and / or epoxies, for exterior and interior can coatings, either base-coats or OPV. The main properties of BF 942 are: high gloss; good sterilization resistance; good flexibility; good over-baking fastness. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011, Annex 1.
BF 991	77 in S2/B	10.000 – 18.000	n- butylated benzoguanamine formaldehyde resin in n-butanol and Solvesso 150, non-plasticized low/medium reactivity benzoguanamine resins, recommended for top quality stoving enamels, excellent gloss, very good compatibility. Very high gloss/gloss retention, mechanical properties, Sterilization resistance and low/medium reactivity.



Product	Supply Form [%]	Viscosity [mPa.s]/23°C	Main uses and characteristics
MF 856	50 in X/IB/B	6.000 – 8.000	Methylol type, highly reactive, iso-butylated melamine formaldehyde resin in iso-butanol / xylene. High reactivity melamine formaldehyde resin with very good compatibility, good petrol- and acid resistance, high gloss for general line, coil and can coatings.
MF 803	50 in X/IB/B	350 – 400	Methylol type, highly reactive, n- butylated and iso-butylated melamine formaldehyde resin in iso-butanol / xylene / n-butanol, with very good compatibility, good petrol- and acid resistance, high gloss for general line, coil and can coatings.
MF 827	60 in IB/B	500 – 700	Methylol type, high reactive, n- butylated/isobutylated melamine formaldehyde resin in n-butanol/ isobutanol, non-plasticized. High reactivity melamine formaldehyde resin for general line, can coatings: exterior, coil coatings with very flow and mechanical properties, very high gloss/gloss retention, excellent sprayability and wide compatibility with saturated polyesters.
UF 132	66 - 70 in IB	2.500 – 6.000	Iso- butylated medium/high reactivity urea formaldehyde resin with very good compatibility with epoxy resins and good stability, low level of free formaldehyde, in iso-butanol, non-plasticized resins for stoving and acid curing paints and coatings with low formaldehyde suitable for electrostatic spray applications, excellent for wood floorings and acid curing wood coatings, general purpose, amino-epoxy systems
UF 110	59 in B/X	2.100 – 2.800	Iso- butylated urea formaldehyde resin in isobutanol and xylene, non plasticized resins for stoving and acid curing paints. medium/high reactivity urea formaldehyde resin with very good compatibility with epoxy resins and good stability, low level of free formaldehyde
UF 162	62 in B/X	700 – 1.800	Iso- butylated medium/high reactivity urea formaldehyde resin with very good compatibility with epoxy resins and good stability, low level of free formaldehyde, non plasticized resins for stoving and acid curing paints, general industrial, stoving primers and enamels, industrial wood coatings and coil coatings (backing coats).
UF 160	60 in B/X	1.000 – 1.300	Iso- butylated urea formaldehyde resin in n-butanol and xylene, non plasticized resins for stoving and acid curing paints. medium/high reactivity urea formaldehyde resin with very good compatibility with epoxy resins and good stability, low level of free formaldehyde.



Product	Delivery Form [%]	Viscosity [mPa.s]/23° C	Main uses and characteristics
PR 312	80 in B	80 – 150	Curable phenolic resin. Used to formulate interior can coating systems.
L 319	42 in S2/B	1.500 – 2.100	Precondensate of epoxy resin and partly butylated phenolic resin. Used in protective coatings, interior coatings for containers, boils, tube coating and injection spraying (tube lining). Offers chemical resistance, hardness and adhesion to steel, tinplate and aluminium.
L 332	50 in S2/B	1.800 – 2.500	Saturated polyester resin modified with a phenolic resin. Used in interior lacquers for food cans and crown corks. Offers light color after stoving and deep drawing properties. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011, Annex 1.
FB 209	57 in B	340 – 490	Non plasticized n-butylated phenolic resin. Used in interior can coating (gold varnishes) and general industrial chemical resistance enamels. Offers chemical resistance, hardness and compatibility with epoxy resins.
FB 210	60 in B	500 – 1.000	Used in interior can coatings, gold varnishes and chemical resistant coatings. Offers chemical resistance and hardness. Compatible with epoxyde resin like Epikote 1007 or 1009, the FB 210 B 60 resin is used for heat curing phenolic / epoxyde combinations where good chemical resistance, light color and hardness are needed. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011, Annex 1.
PR 217	55 in B	100 – 200	Butylated phenol resol with good compatibility to different resin systems, e.g. epoxy or polyester resins. The phenol resin has a low formaldehyde content of less than 0.1%, has good adhesion, hardness and flexibility as well as excellent sterilization resistance and chemical resistance with exception of strong alkalines. The product is a heat-reactive resin with limited shelf life. Extended storage at high temperatures should be avoided to prolong the useful life of the resins. Conforms to US FDA CFR 21 § 175.300 and EU 10/2011, Annex 1.



Our high molecular butylated phenolic resins are used as crosslinkers for epoxy and polyester systems. VARANOL products offer good compatibility with different resin systems. According to the formulation, the produced can coatings provide high elasticity and excellent chemical resistance. VARANOL for can coating application conforms to US FDA, 21 CFR § 175.300 and EU 10/2011, Annex 1.



BRANDS OF THE POLYISOCYANATE

Product	Supply Form [%]	Viscosity [mPa.s]/23°C	NCO Content [%]	Description	Main uses				
					Primer	Basecoat	Topcoat	1K	2 K
UB 147	75 in S1	2.000 – 4.000	11.5	Blocked aliphatic polyisocyanate resin. Flexibility, chemical resistance and adhesion	X		X	X	
UB 146	80 in M	4.500 – 7.500	6.7	HDI blocked polyisocyanate cross linker, thick heavy duty coatings as underbody car protection, automotive primer surfacer/topcoat. Stone chip resistance, chemical resistance and adhesion.	X		X	X	
N 3800	100	4.800 – 7.200	11.0	Aliphatic polyisocyanate (flexibilizing HDI trimer). For coating systems based on N 3800 are air and heat-drying automotive OEM, automotive refinishing and transportation coatings, as well as industrial coatings and coatings for plastics.	X	X	X		X
HD 3100	100	2.000 – 3.600	17.4	Aliphatic polyisocyanate, based on HDI for aqua PU-coating.	X	X	X		X



HIGH PERFORMANCE COATINGS APPLICATIONS

VARENA is at the forefront of blocked isocyanate technology and our products designed as solvent-borne, water-based and 100% solids meet the requirements of high performance coatings formulations in a wide range of application areas.

VARENA CHEMICAL CROSSLINKER RESINS

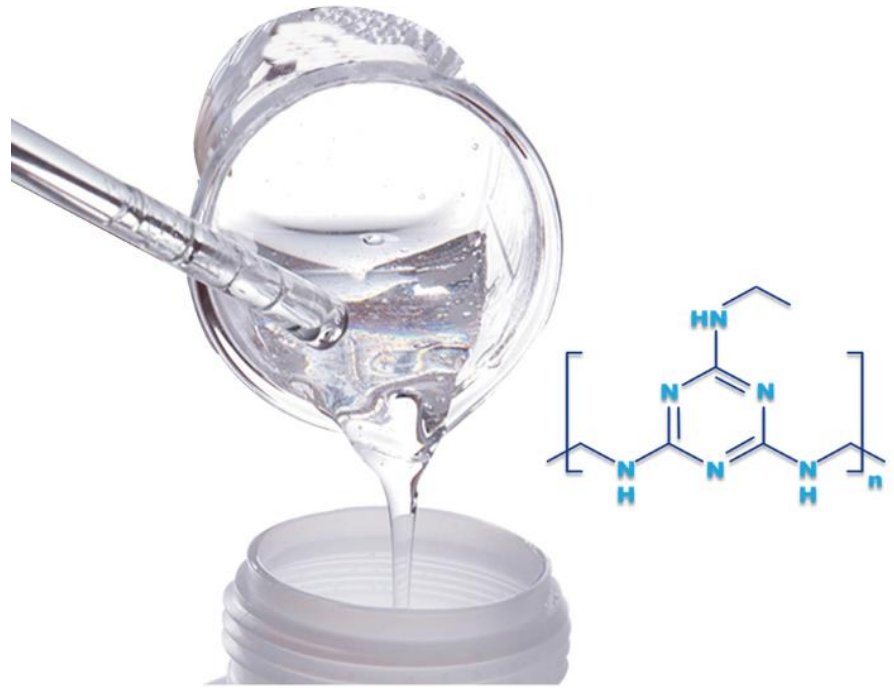
VARENA CHEMICAL is a global company in the intermediates, coating, adhesives, inks and composite and solid surface resins, thermoset compounds, gel-coats and niche specialties and specialty additives for coatings and inks.

VARENA CHEMICAL is known for its superior quality and impressive range of products and with its excellent distribution network it can provide first-class service to customers whatever their market. Customer Service and Technical Service teams are renowned for their customer focus, offering the best service even after products have left manufacturing.

The group strives to keep customers satisfied, assisting them in producing premium quality products every time they use its products.

Product innovation is important for the group's business and it's the reason for which it constantly works with customers to find solutions to problems.

Introducing new or improved products ensures that VARENA CHEMICAL continue not only to deliver what the market wants and needs, but also when it is wanted and needed.



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