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INDEX

BENASOL - Alkyd Resins SHORT- OIL

BENASOL	Oil type and Modification	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Applications				Suggested uses
								Air	Bake	Nitro	Catalyz.	
AS 280	Soya	28	XYLENE BUTYL ACETATE.	60	Y - Z1	6 - 15	5	■	■	■	■	Fast air-drying and low curing oven temperature enamels with excellent outdoor and chemical resistances.
CO 34	Special Fatty Acids	34	TOLUENE	60	Y - Z1	6 - 15	5	■				Fast air-drying white and coloured enamels for industrial applications and traffic paints.
AS 379	Special Fatty Acids	43	XYLENE	60	Z1-Z2	6 - 12	5	■				Fast air-drying white and coloured enamels for industrial applications.
AS 3716	Special Fatty Acids	37	BUTYL ACETATE	75	Z3 - Z4	6 - 12	5	■				HIGH SOLIDS fast air-drying white and coloured enamels for industrial applications.
CO 35	Soya Fatty Acids	35	XYLENE XYLENE/ BUTYLACET.	60 65	Z2 - Z4 Z2 - Z3	6 - 15	8 4	■				Very fast air-drying enamels for industrial applications and traffic-paints.
CO 37	Special Fatty Acids - Urethane Aliphatic	37	BUTYL ACETATE	65	Z1 - Z2	6 - 12	4	■				Very fast non-yellowing air-drying enamels for outdoor applications, particularly for agricultural equipment.
R 40D	Dehydrated castor oil	40	XYLENE	60	Z - Z1	15 - 24	5	■	■			Non-yellowing air-drying and low curing oven temperature enamels with high mechanical performance.
4 V	Linseed - Tung Phenolic	33	XYLENE BUTYL ACET.	50 60	W - Y Y – Z1	23 - 30 15 - 26	8	■				Rust-inhibitive metal and non lifting primers for nitrocellulose laquers, for metals.

BENASOL - Alkyd Resins MEDIUM - OIL

BENASOL	Oil type and Modifications	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Applications				Suggested uses
								Air	Bake	Nitro	Catalyz.	
AS 308	Soya Fatty Acids	47	XYLENE XYLENE/W.S.	60 55	Z1 - Z2 Z - Z2	6 - 12	6	■				Fast air-drying enamels for building and industrial applications, also combined with chlorinated rubber. Fast through-dry.
AS 452	Special Fatty Acids	37	SOLVESSO 100	75	X - Z	4 - 8	6	■	■	■	■	Universal tinting-system vehicle having wide compatibility with resins and film-forming binders.
AS 453	Special Fatty Acids	42	SOLVESSO 100	70	V - Y	4 - 10	6	■	■	■	■	Universal tinting-system vehicle having wide compatibility with resins and film-forming binders.
FL 40	Special Fatty Acids	48	WHITE SPIRIT	40	Z2 - Z3	6 - 15	6	■				Slightly thixotropic resin for architectural sealers, high quality non-yellowing matt topcoats, also suitable for “do-it-yourself” applications.
L 50 AV	Linseed	49	WHITE SPIRIT AROMATIC FREE	50	Z3-Z5	6 - 16	7	■				Air-drying metal primers and general pourpose industrial enamels.
S 50	Soya	52	WHITE SPIRIT AROMATIC FREE	50	Z1-Z3	6 - 15	7	■				Non-yellowing air-drying enamels for decorative and industrial maintenance.
5097	Linseed - Tung Phenolic	42	XYLENE WHITE SPIRIT AROMATIC FREE	60 50	U-W Z-Z2	6 - 15	9	■				Quick air-drying primers and enamels with excellent chemical and outdoor resistance.

BENASOL - HIGH SOLIDS Alkyd Resins LONG - OIL -1-

BENASOL	Oil type and Modification	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Applications				Suggested uses
								Air	Bake	Nitro	Catalyz.	
HS 75	Special unsaturated Fatty Acids	67	WHITE SPIRIT	75	Y - Z1	5 - 8	4	■				High performance non-yellowing paints for interior and exterior, building industry and “do-it-yourself” applications.
HS 753	Non yellowing unsaturated Fatty Acids	64	WHITE SPIRIT	75	Z2 - Z3	< 10	6	■				Good Price & Quality ratio suitable for non-yellowing paints, for interior and exterior, building industry and “do-it-yourself” applications.
HS 754	Non yellowing unsaturated Fatty Acids	**63**	WHITE SPIRIT AROMATIC FREE	75	Z1-Z3	5-10	6	■				Good Price & Quality ratio suitable for non-yellowing paints, for interior and exterior, building industry and “do-it-yourself” applications.
HS 86	Special unsaturated Fatty Acids	66	WHITE SPIRIT	80	Z - Z2	12 - 18	4	■				High performance non-yellowing paints for interior and exterior, building industry and “do-it-yourself” applications, conforming to **DECO paints CE 2004-42.**
HS 6922	Special unsaturated Fatty Acids	67	WHITE SPIRIT AROMATIC FREE	85	Z2 - Z3	8 - 15	7	■				General purpose non-yellowing paints for interior and exterior, for building industry and “do-it-yourself” applications, conforming to **DECO paints CE 2004-42.**
HS 7380	Special unsaturated Fatty Acids	65	WHITE SPIRIT AROMATIC FREE	85	Z - Z2	< 12	4	■				High performances non-yellowing paints for interior and exterior, building industry and “do-it-yourself” applications, conforming to **DECO paints CE 2004-42.** Excellent compatibility with concentrate medium oil pigmented pastes.
HS 7100	Special unsaturated Fatty Acids	69	WHITE SPIRIT	80	Z - Z2	< 10	5	■				High performance non-yellowing paints for interior and exterior, building industry and “do-it-yourself applications”, conforming to **DECO paints CE 2004-42.**

BENASOL - HIGH SOLIDS Alkyd Resins LONG - OIL -2-

								Applications				
BENASOL	Oil type and Modification	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Air	Bake	Nitro	Catalyz.	**Suggested uses**
SI83	Non yellowing unsaturated Fatty Acids	83	---	99	Z1 - Z2	6 - 10	4	■				**Economical grade.** High Solid resin suitable for cutting the viscosity when formulating enamels conforming to **DECO paints CE 2004-42**. Grinding vehicle to produce non Yellowing tinting pastes and to increase the build-up and the brush ability of conventional paints.
FX 97	Special unsaturated Fatty Acids	73	---	98	Z3 - Z4	6-15	6	■				**Very fast** High Solid resin suitable for cutting the viscosity when formulating enamels conforming to **DECO paints CE 2004-42**. Grinding vehicle to produce non Yellowing tinting pastes and to increase the build-up and the brush ability of conventional paints.
HS 120	Special unsaturated Fatty Acids	80	---	99	X - Y	< 5	6	■				**Fast** High Solid resin suitable for cutting the viscosity when formulating enamels conforming to **DECO paints CE 2004-42**. Grinding vehicle to produce non Yellowing tinting pastes and to increase the build-up and the brush ability of conventional paints. Good compatibility with medium oil pigmented pastes.

BENASOL - Alkyd Resins LONG - OIL -3-												
								Applications				
BENASOL	Oil type and Modification	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Air	Bake	Nitro	Catalyz.	**Suggested uses**
FX66	Special unsaturated Fatty Acids	67	WHITE SPIRIT AROMATIC FREE	70	Z1 – Z3	6 - 8	3	■				High performance non-yellowing paints for interior and exterior, building industry and “do-it-yourself” applications. Very good colour retention also in the dark.
L65	Linseed	65	WHITE SPIRIT AROMATIC FREE	70	Z3 – Z4	6 - 12	7	■				Coloured enamels and rust-inhibiting air-drying primers for building industry and “do-it-yourself”.
S60	Soya	62	WHITE SPIRIT	70	Z – Z1	6 - 12	6	■				Architectural enamels for interior and exterior applications.
T68	Talloil	68	WHITE SPIRIT	75	Z - Z1	6 - 15	9	■				High-solids enamels for building industry. Clear finishes and impregnating vehicles for wood.
1804	Linseed - Tung Phenolic	68	WHITE SPIRIT AROMATIC FREE	65	Y – Z1	6 - 10	9	■				Anticorrosive primers, enamels and clear finishes with excellent resistance to marine corrosion.

BENASOL - Alkyd Resins HYDROXYLATED - 1-

BENASOL	Oil type and Modification	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	OH % Solids	Applications				Suggested uses
									Air	Bake	Nitro	Catalyz.	
A 240	Hydrogenated Castor Oil	44	XYLENE/BUTYL ACETATE	60	Y - Z1	6 - 15	5	5.3 - 5.7			■	■	Urethane two-components non-lifting sealers and very hard matt topcoats for wood.
B1	Vegetable Fatty Acids	30	XYLENE	50	X - Y	6 - 15	5	2.6 - 2.8			■	■	Urethane two-components matt topcoats and sealers with high reactivity and easy sandability.
C 300	Coconut Fatty Acids	33	XYLENE	60	Z1 - Z2	6 - 15	3	2.8 - 3.0		■	■	■	Non-yellowing baking enamels. Polyurethane topcoats and nitrocellulose lacquers.
E 114	Synthetic Fatty Acids	25	XYLENE	75	Z3 - Z5	6 - 15	3	5.4 - 5.6		■	■	■	Clear and pigmented topcoats for metals and wood. Large compatibility with acrylics, polyesters, alkyds and film-forming vehicles. Universal tinting-systems.
E 184	Synthetic Fatty Acids	28	XYLENE	70	Z1 - Z3	6 - 12	3	2.3 - 2.5		■	■	■	Non-yellowing nitrocellulose lacquers for automotive finishes. Bake and two-components polyurethane enamels.
F 71	Hydrogenated castor oil/ Vegetable Fatty Acids	41	XYLENE	60	Z1 - Z2	15 - 20	4	4.4 - 4.6			■	■	Two-components polyurethane glossy or matt finishes, sealers, endowed with high transparence.
F 73	Hydrogenated Castor Oil	43	BUTIL ACETATE	70	X - Z	15 - 23	4	4.5 - 4.7				■	High-quality clear and pigmented polyurethane finishes for wood.
4377	Non-drying Fatty Acids	41	XYLENE	65	V-W	6 - 12	3	2.4-2.6			■	■	Binder for nitro cellulose sealers and topcoats both for metal and for wood.

BENASOL - Alkyd Resins HYDROXYLATED - 2-													
									Applications				
BENASOL	**Oil type and Modification**	**Oil %**	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [G.H.] max.**	**OH % Solids**	**Air**	**Bake**	**Nitro**	**Catalyz.**	**Suggested uses**
RC 45	Castor / Vegetable Fatty Acids	42	XYLENE	60	Z1 - Z3	6 - 15	6	4.2 - 4.4		■	■	■	Excellent polyurethane sealers and matt finishes for wood. Nitrocellulose lacquers.
RC 75	Castor	78	XYLENE	80	X - Y	6 - 10	5	5.8 - 6.0			■	■	High-gloss polyurethane finishes and vehicle to improve the general performances of wood systems. Plastifying agent for nitrocellulose systems
R 126	Castor	53	XYLENE	60	X - Y	6 - 15	5	5.4 - 5.6			■	■	Polyurethane clear finishes and lacquers for wood and metals. Plastifying agent for nitrocellulose systems
R 127	Castor	59	XYLENE	60	W - Y	6 - 15	5	5.2 - 5.4			■	■	Polyurethane high build-up clear finishes and lacquers endowed with good adhesion and flexibility for metals and wood. Plastifying agent for nitrocellulose systems
RT 43	Castor / Talloil	43	XYLENE	60	Z1 - Z2	6 - 15	6	4.0 - 4.2			■	■	Sealers and topcoats with high build-up and fast drying properties.
SI 25	Special fatty acids	25	XYLENE	60	X - Y	6 - 15	3	7.2-7.4				■	High-gloss polyurethane finishes endowed with high hardness and gloss even after polishing the paint. Reactive with aliphatic isocyanates.
SI 32	12-Hydroxy stearic	30	BUTYL ACETATE	70	Z1 – Z3	6 - 15	4	5.7-5.9				■	It's recommended to formulate high glossy topcoat easy to be polished in a very short time, especially addressed to wood coating applications. Very reactive with aliphatic isocyanates.
T 35	Talloil	35	XYLENE	50	Z1 - Z3	6 - 15	5	4.5 - 4.7		■	■	■	General industrial baking enamels. Hammer bake coatings. Nitrocellulose sealers and topcoats both for wood and metal.

BENASOL - Oils and Resins URETHANE MODIFIED									
BENASOL	**Oil type**	**Oil %**	**Modification**	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [G.H.] max.**	**Suggested uses**
UR 59 X	Vegetable Oils	56	Aromatic Isocyanate	XYLENE	50	Z2 - Z4	1 - 3	6	One-component sanding sealers and fast-drying matt finishes for wooden frames. Compatible with nitrocellulose and vinyl copolymers.
UR 59 WS	Vegetable Oils	58	Aromatic Isocyanate	WS AROMATIC FREE**	50	Z2 - Z4	1 - 3	6	One-component air-drying glossy and flat finishes, suggested for floors, window and door frames.
UR 60	Vegetable Oils	65	Aromatic Isocyanate	WS AROMATIC FREE**	60	Z2 - Z4	1 - 3	6	One-component fast-drying clear varnishes with good resistance to industrial and marine environment. Coatings for floors, wooden frames and “do-it-yourself” applications.
UR 61	Soya Fatty Acids	60	Aromatic Isocyanate	WS AROMATIC FREE	60	Z1 - Z3	2 - 8	7	Alkyd-urethane resin endowed with outdoor resistance, suggested for formulating clear or pigmented finishes for wood and metals.
UR 64	Soya Fatty Acids	61	Aromatic Isocyanate	WS AROMATIC FREE	55	Z –Z2	1 - 3	5	Alkyd-urethane resin endowed with outdoor resistance, suggested for formulating clear or pigmented finishes for wood and metals.
UR 65	Special Fatty Acids	58	Aliphatic Isocyanate	WS AROMATIC FREE	55	Z2 - Z3	2 - 6	5	Non-yellowing varnishes and paints endowed with high-gloss retention, hardness and chalk-resistance.
UR 4984	Safflower	65	Aliphatic Isocyanate	WS AROMATIC FREE	60	Z1 - Z3	1 - 3	4	Non-yellowing clear and pigmented coatings with excellent properties of through-dry, hardness, adhesion, chemical and marine resistance. Premium quality finishes for yachts and “do-it-yourself**”.**
UR 6005	Safflower	67	Aliphatic Isocyanate	WS AROMATIC FREE	70	Z1 - Z3	1 - 3	4	Non-yellowing clear and pigmented coatings with excellent properties of through-dry, hardness, adhesion, chemical and marine resistance. Premium quality finishes for yachts and “do-it-yourself”, c**onforming to DECO paints CE 2004-42 .**
UR 85	Special vegetable Fatty Acids	63	Isocyanic Modification	WHITE SPIRIT	85	Z1 – Z3	5	6	Non-yellowing clear and pigmented coatings with excellent properties of through-dry, hardness, adhesion, chemical and marine resistance. Particularly suggested in clear and pigmented matt finishes Premium quality finishes for yachts and “do-it-yourself”, **conforming to DECO paints CE 2004-42.** Good compatibility with concentrate medium oil pigmented pastes.
FL 34	Drying Fatty Acids	59	Aromatic Isocyanate	WS AROMATIC FREE	55	Z – Z2	1-3	5	Medium thixotropy binder to be used for high build up sealers for wood and metal **conforming to DECO paints CE 2004-42.**

****= available also in Exol D 60 Version**

BENESTER - SATURATED POLYESTERS - 1-								
BENESTER	**Type**	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [G.H.] max.**	**(OH) % Solids**	**Suggested uses**
694	Linear	SOLVENT NAPHTA AB BUTYLGLYCOL	55	Y - Z1	2 - 6	3	0.6 - 0.8	Fast baking cycles for coil-coating. Anticorrosive primers also for automotive industry.
T 76	Slightly Branched	SOLVESSO 100 BUTYLGLYCOL	65	X - Z	2 - 10	2	1.6 - 1.8	Economical Grade resin, for oven-systems where post-formability is required, like in can or coil-coating applications.
5918	Linear	SOLVESSO 100 BUTYLGLYCOL	70	V - X	< 5	2	2.2 - 2.4	High – yield coil – coating enamels with very good characteristics of build – up adhesion, flexibility and hardness.
L 83	Slightly Branched	SOLVENT NAPHTA AB BUTYLGLYCOL	60	Z - Z1	2 - 6	3	1.0 - 1.2	Coil-coating enamels for interior/exterior applications, endowed with high flexibility, glossy, colour retention.
910	Slightly Branched	SOLVENT NAPHTA AB BUTYLGLYCOL	60	Y - Z1	2 - 6	3	1.6 - 1.8	Coil-coating enamels particularly indicated for out door applications, endowed with high flexibility, gloss and colour retention.
2580	High aliphatic content	BLEND OF SOLVENTS	70	Y - Z	5 - 10	2	0.9 - 1,1	High – yield coil – coating enamels with very good characteristics and adhesion on metals without primer.
5327	Linear	SOLVENT NAPHTA AB BUTYLGLYCOL	75	Z – Z2	3 - 10	3	2.0 - 2.2	Plasticizer vehicle for can and coil-coating systems.
46	Linear/ Slightly branched	SOLVENT NAPHTA AB BUTYLGLYCOL	60	W - Y	< 5	3	0.5 – 0.7	Plasticizer vehicle for can and coil-coating systems where post-formability and out-standing weatherability properties.

BENESTER - SATURATED POLYESTERS - 2-								
BENESTER	**Type**	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [G.H.] max.**	**(OH) % Solids**	**Suggested uses**
602	Linear	SOLVENT NAPHTA AB BUTYL GLYCOL	65	U - V	5 - 10	2	1.3 - 1.5	Back coatings, especially recommended for coil-coating with very high solid contents.
27	Slightly Branched	NAPHTA SOLVENT BUTYL GLYCOL	70	U-W	4-10	3	2.8 - 3.0	Back coatings, and especially recommended for coil-coating with high solid content and for industrial baking enamels with very good characteristics of flexibility, adhesion and gloss.
742	Slightly Branched	XYLENE	65	V - X	18 - 22	2	/	Primers and enamels for industrial coatings, cross-linked with amino–resins, to formulate bake–primers or finishes. Particularly suggested in metallic base-coats formulation for car finishes. Wide compatibility with CAB (Cellulose Aceto Butyrate).
PZ 300	Aliphatic - Linear	---	100	V - X	8 - 18	5	2.0 - 2.2	Plasticizer polymer for two-component polyurethane systems for metal and plastic. Plasticizer vehicle for can and coil-coating systems. Grinding vehicle for pigmented “master batches” pastes.
896	Slightly Branched	SOLVESSO 100 BUTYLGLYCOL	55	V - X	3 - 8	3	1.2 – 1.4	Cross-linked with amino- resins or blocked poly-isocyanates, in industrial baking primers and enamels, particularly for base-coatings and over-print varnishes with good printability properties also with UV inks, in cans, spray-bottles and collapsible tubes.
839	Slightly Branched	SOLVENT NAPHTA AB BUTYLGLYCOL	55	X - Y	3 - 8	3	1,4-1,6	Modified saturated Polyester, cross-linked with Benzoguanamine Resins suitable for Organosols production.

BENASEDO S.p.A.

index

SILICONE MODIFIED RESINS

	Type	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	(OH) % Solids	Suggested uses
BENASOL SL - SILICONE ALKYDS								
SL 58	Air drying medium oil Alkyd Silicone Modified	WHITE SPIRIT AROMATIC FREE	60	Y – Z1	6 - 12	6	---	High quality pigmented or clear finishes for industry, with high brightness retention, even after long outdoor or marine environment exposure. Enamels to be applied when resistance to temperature (180 – 220°C) is required.
BENESTER SL - SILICONE POLYESTERS								
EPOBEN SL 74	Silicone Modified Epoxy - Ester	XILENE	60	X - Z	5 - 12	6	---	Heat resistant enamels endowed with characteristics of adhesion, hardness, very good moisture and salts resistances. Suggested for industrial applications (over 250°C).
SL 260	Silicone Polyester	M.P.A.	65	Z2 – Z3	8 - 20	3	---	Excellent resistance to medium / high temperatures. Suitable to produce enamels endowed with high gloss level, outdoor durability and chemicals resistance properties. Suggested for industrial applications (over 250°C).
SL 261	Silicone Polyester	M.P.A.	55	U -W	//	2 mass.	---	Excellent resistance to medium / high temperatures. Suitable to produce enamels endowed with high gloss level, outdoor durability and chemicals resistance properties. Suggested for industrial applications (over 250°C).

BENESTER - UNSATURATED POLYESTERS						
BENESTER	**Solvent or Monomer**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [G.H.] max.**	**Suggested uses**
LD 75 R	BUTYL ACETATE	75	Z3-Z4	24 - 36	3	Clear and pigmented sealers for wood, easy to be sanded. Clear finishes endowed with good brightness and high hardness. Curing by U.V. or Redox processes. It can be also used to produce tinting-pastes.
G 22	BUTYL ACET.	80	Z1 – Z3	24 - 36	2	Self-curing, styrene-free polyester for clear and pigmented sealers and finishes for wood furniture.

ISOBEN - HYDROXYLATED POLYESTERS

ISOBEN	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	OH % Solids	Applications				Suggested uses
							Air	Bake	Nitro	Catalyz.	
IS. 5	XILENE M.P.A.	67	Z4-Z6	2-10	2	8.0 - 8.2				■	High chemical resistant polyurethane coatings, suggested for building industry and maintenance.
IS. 6	BUTYL ACETATE.	70	Y - Z1	15 - 24	3	4.0 - 4.2			■	■	Polyurethane enamels for wood and metals. Marine and automotive industry coatings when high mechanical and durability resistances are required. Good compatibility with acrylic resins.
IS. 10	BUTYL ACETATE	70	Z - Z2	12 - 22	3	2.5 - 2.7				■	Industrial polyurethane coatings, at low request of Poly Isocyanate hardener. Overprint varnishes. Fast curing. Good compatibility with acrylic resins.
IS. 11	---	100	T-V (80%AI)	2 - 6	3	5.9 - 6.1				■	Polyurethane wood coatings; particularly suggested for floor varnishes, when combined with other hydroxylated pure alkyds.
IS. 15	BUTYL ACETATE	75	Z4-Z5	6-12	<1	4,5-4,7				■	Very good compatibility with acrylic resins; it's really recommended for car refinishin industrial and wood paints also for marine outdoor applications, combined with aliph isocyanates.
IS. 87	BUTYL ACETATE	70	Z – Z2	10-18	2	5.1 - 5.3				■	Clear and pigmented finishes for wood, endowed with high build-up and hardness. Enamels for metals, interior/exterior.
IS. 168	BUTYL ACET.	80	Y - Z1	10 - 20	3	5.1 - 5.3			■	■	HIGH SOLIDS polyurethane enamels for wood and metals. Marine and automotive industry coatings when high mechanical and durability resistances are required. Good compatibility with acrylic resins.

ACRIBEN - HYDROXYLATED ACRYLIC RESINS											
							Applications				
ACRIBEN	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [HAZEN] max.**	**OH % Solids**	**Air**	**Bake**	**Nitro**	**Catalyz.**	**Suggested uses**
RF 450	XILENE BUTYL ACETATE	50	Z3 - Z5	//	2	0.9 – 1.1	■	■		■	ACRIBEN RF450 is a low hydroxyl acrylic binder suggested to formulate pigmented PUR- Sealers coatings with good adhesion on plastic and metallic surface

HARTBEN - Adducts and polyisocyanates POLYURETHANES

HARTBEN	Type	Solvent	Solids %	Visc. [G.H.]	Colour [G.H.] max.	NCO %	Free monomer %	Suggested uses
SV 100	Aromatic Polyisocyanurate	BUTYL ACETATE	50	T - V	2	7.8 - 8.2	< 0,5	Very fast-curing sealers with easy hand or mechanical sandability, to be plasticized by adding Hartben 75 P/ST.
E 23	Aromatic Polyisocyanurate	BUTYL ACETATE	50	G - J	2	7.8 - 8.2	< 0,5	Fast-curing two-components sealers and finishes, by spray or curtain coating machine application, with good “pot-life” and lift resistance. Wide compatibility with nitrocellulose.
AM 29	Aliphatic-aromatic Polyisocyanurate	BUTYL ACETATE	60	N - Q	2	10.4 - 10.8	< 0,5	Polyurethane coatings with good colour retention, gloss, toughness and hardness. Recommended for metals and wood.
75 P/ST	Aromatic Adduct	ETHYL ACETATE	75	V - Y	1	12.5 - 13.5	< 0,5	Two-components sealers and clear or pigmented finishes, for wood and industrial applications. Flexibilizing agent for poli-isocyanurate aromatic products.
A 75	Aliphatic Polyisocyanurate	XYLENE / M.P.A.	75	D-I	2	14.5 - 16.5	< 0,5	Two-components non-yellowing clear or pigmented finishes for wood and metals. High mechanical performances and outdoor durability.
MC 53	Moisture-curing Aromatic Prepolymer	XYLENE / M. P. A.	60	H - L	3	5.5 - 6.5	< 0,5	One-pack glossy and matt lacquers for parquets and concrete floors.
405	Aromatic Polymer	ETHYL ACETATE	80	M - R	2	---	---	Elastomeric polymer, plasticizer and adhesion promoter for nitrocellulose. Flexography inks for paper and plastic substrates.

EPOBEN - EPOXY ESTERS

EPOBEN	Fatty acid type	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Applications				Suggested used
								Air	Bake	Nitro	Catalyz.	
R 403	Dehydrated Castor Oil	40	XYLENE SOLVESSO 100	50 60	T - W Z3 - Z5	0.5 - 1.5	4 5	■	■			Air-drying and baking primers, also suitable for industrial application enamels with excellent adhesion, alkali and solvent-resistant properties. Zinc-rich rust-inhibitive primers.
C0 74	12-Hydroxy-Stearic Acid	35	XILENE	60	Z3 - Z5	1-3	7		■			Non-yellowing clear or pigmented baking finishes in combination with amino-resins. Excellent adhesion, post-formability and chemical resistance.

IDROBEN - WATER EMULSION RESINS

									Applications				
IDROBEN	**Type and Modification**	**Oil %**	**Solvent**	**Solids %**	**Viscosity [cps at 25°C]**	**A.V. Solids**	**pH**	**Colour**	**Air**	**Bake**	**Nitro**	**Catalyz.**	**Suggested uses**
130	Alkyd Emulsion - Drying Fatty Acids	20	WATER	42	1500 3000 (20°C)	…	6.5-7.5	Milky White		■		■	Industrial air- drying or baking enamels. Tinting pastes vehicle.
178	Aliphatic Urethane Alkyd Emulsion - Special Fatty Acids	33	WATER	44	500 2300	…	7.0-8.0	Milky White	■	■			Fast air–drying enamels with high body and flexibility. Recommended for industrial and “do it yourself” applications.
180	Aromatic Urethane Alkyd Emulsion - Drying Fatty Acids	20	WATER	43	450 1200 (20°C)0	…	7.0 - 8.0	Milky White	■	■			Industrial anticorrosive primers, fast air drying finishes with good adhesion and mechanical charachteristics.

IDROBEN - WATER DISPERSION RESINS

									Applications			
IDROBEN	**Type and Modification**	**Oil %**	**Solvent**	**Solids %**	**Visc [Brookf.] m Pa.s**	**OH% Solids**	**pH**	**Colour**	**Air**	**Bake**	**Catalyz.**	**Suggested uses**
PD 723	Aliphatic Polyurethane Dispersion Special fatty acids		WATER	40	<1000	…	7.5 - 8.5	Milky White	■	■	■	Fast air–drying Decorative and Industrial finishes endowed with high characteristics of adhesion, high-body and gloss, to be also applied by brush.
PD 717	Aliphatic Polyurethane dispersion Special fatty acids		WATER	40	<200	…	7.5 - 8.5	Milky White	■	■		Very fast air–drying Decorative and Industrial finishes endowed with high hardness and good mechanical characteristics.
PD 7051	Aliphatic Hydroxylated Polyurethane Dispersion		WATER	40	100 1000	4.4 - 4.6	7.0 - 8.5	Milky White		■	■	Two Comp. clear and pigmented enamels, cross-linked with aliphatic Poly-Isocyanates endowed with high gloss values, non yellowing, flexibility, chemical resistance and weatherability properties.
201	Polyurethane Dispersion	…	WATER	32	<100	…	8,5-9	White translucent	■	■		Film-forming resin, very fast-drying, suggested for flexible sealers and finishes for wood, metals and plastics, possibly to be combined with acrylic resins. No coalescent required.
202	Polyurethane Acrylic Dispersion	…	WATER	34	20-100	…	8.0-9.0	White translucent	■	■		Film-forming resin for sanding sealers and finishes for wood, metals and plastics, possibly to be combined with acrylic resins. No coalescent required.
207	Aliphatic Polyurethane Dispersion	…	WATER	32	0-500	…	7.5 - 8.2	White translucent	■	■		NMP_free, film-forming, fast-drying resin endowed with flexibility and surface hardness, mar and water resistances. Finishes for wood, metals, glasses and plastics, possibly to be combined with acrylic resins. No coalescent required.

ACRIBEN - ACRYLIC EMULSION

IDROBEN/ ACRIBEN	Type and Modification	Solvent	Solids %	Visc [Brookf.] m Pa.s	pH	MFT	TG	Colour	Density	Applications Air	Applications Bake	Suggested uses
SA 338	Self Cross-linking Acrylic Emulsion	WATER	39	< 500	7.5 - 8.5	15°C	39°C	Milky White		■	■	Fast drying clear and pigmented water based top-coats for furniture endowed with very good transparency and chemical resistance matched with Non Yellowing properties.
SA 437	Self Cross-linking Acrylic Emulsion	WATER	37	< 250	8.0 – 9.0	10°C	19°C	Milky White		■	■	Fast drying clear and pigmented water based sealers for furniture endowed with very good sanding, good transparency. Non Yellowing.
SA 5302	Self Cross-linking Acrylic Emulsion	WATER	40	< 500	7,5-8,5	9°C	-	Milky White		■	■	Fast drying and fast blocking resistant coatings for Joinery, Suitable for indoor and outdoor in clear and opaque systems, endowed with high blocking and good early water resistance.
4913	Acrylic Emulsion - oil modified	WATER - BUTYL GLICOL	42	150-300	7.5-8.2	0°C	-	Milky White		■	■	Clear and pigmented systems for Indoor and outdoor, endowed with high body and glossy, particularly suggested for wood stains with good impregnating characteristics. Finishes for wood and metals. No coalescent required.

IDROBEN - UV WATERBORNE POLYURETHANE DISPERSIONS

IDROBEN	Type and Modification	Solvent	Solids %	Visc [Brookf.] m Pa.s	pH	MFT	TG	Colour	Density	Applications Air	Applications Bake	Suggested uses
UV 747	UV curable Aliphatic Polyurethane Dispersion	WATER	40	<500	7.0 – 7.8	-	-	Milky White		■		Especially recommended for clear sealers and topcoats for wood paints. It's tack free before the lamps, showing good hardness after curing.
UV 76	UV curable Aliphatic Polyurethane Dispersion	WATER	40	250-1000	7.0 - 8.0	-	-	Milky White		■		Especially recommended for clear and pigmented sealers and topcoats for wood paints. It's tack free before the lamps, showing high hardness and chemical resistances behaviour after curing.
UV 737G	UV curable Aliphatic Polyurethane Dispersion	WATER	40	50-1000	7.5 – 8.0	-	-	Milky White		■		Suitable for clear glossy topcoats especially on wood substrates. The binder is sticky before the UV lamps and shows good hardness and gloss value (>90) after curing.

IDROBEN - WATER-DILUTABLE RESINS

									Applications				
IDROBEN	**Type and Modification**	**Oil %**	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**pH**	**Colour [G.H.] max.**	**Air**	**Bake**	**Nitro**	**Catalyz.**	**Suggested uses**
828	Alkyd - Special fatty acids	30	BUTYLGLYCOL Sec. BUTANOL	75	Z4 – Z5	38 - 44	…	4	■	■			Non yellowing air–drying or baking enamels, with high–mechanical performances. Stoving undercoats and primers for metal.
827	Alkyd - Special fatty acids	36	BUTYLGLYCOL Sec. BUTANOL	70	Z3 – Z5	37 - 43	…	6	■	■			Non yellowing fast–drying or baking enamels, with high–mechanical performances. Stoving undercoats and primers for metal.
878	Epoxy ester - Drying fatty acids	48	BUTYLGLYCOL	68	Z2+1/2 - Z3	45 - 55	…	12	■	■			Baking – curing primers or finishes with high characteristics of adhesion.
4705	Soya fatty acids	38	BUTYLGLYCOL	75	Z5 – Z6	50 - 60	…	4	■	■			High solid non yellowing paints, suitable both for air and fast-drying baking enamels or primers.
EP 5595	Epoxy ester Acryl modified - Drying fatty acids	38	BUTYLGLYCOL BUTANOL	70	Z1 – Z3	46 - 51	…	5	■	■			Fast Air and Baking – curing primers or finishes with high characteristics of adhesion, flow and hardness.
3519	Saturated Polyester	---	BUTYLGLYCOL	69	Z1-Z2	45 - 50	---	2		■			Industrial baking enamels with good post-formability, particularly suitable for collapsible tubes and cans. Good build up flow and hardness properties.
2026	Saturated Polyester	---	WATER	50	Z4 - Z6	…	7.0 - 8.0	2		■			Zero – voc, non – yellowing baking industrial primers and enamels, with very good adhesion and high mechanical characteristics.

*=viscosity brookfield mPas 25°C

BENCRYL UV- EB RADIATION CURING PRODUCTS									
BENCRYL	**Type**	**Monomer**	**Theoretical Solids %**	**Visc. [G.H.]25°C**	**A.V. Solids**	**OH% Solids**	**Functionality of prepolimer**	**Colour [G.H.] max.**	**Suggested uses**
PU 141	Branched Aliphatic Urethane Acrylated Olygomer	TPGDA	57	Z1 – Z2	1 max.	---	>2,0	1	Non yellowing clear topcoats for wood, paper and plastic substrates endowed with **good** flexibility, abrasion and chemicals resistance. Suitable when used in combination with isocyanates for dual cure systems.
PU 137	Linear Aliphatic Urethane Acrylated Olygomer	HDDA OTA	66	Z3 – Z5	1 max.	---	>2,0	1	Non yellowing clear topcoats endowed with **excellent** flexibility, durability and abrasion resistance, for wood, paper and plastic substrates.
PU 139	Branched Aromatic Urethane Acrylated Olygomer	HDDA	70	Z2 – Z3	1 max.	---	>2,0	1	Clear topcoats endowed very good abrasion resistance, for wood.
PU 1515	Linear Aromatic Urethane Acrylated Olygomer	TPGDA	70	Z – Z2	1 max.	---	>2,0	1	Clear topcoats endowed with **good** flexibility, abrasion and chemicals resistance, for wood, paper and plastic substrates.

BENALAC - Alkyd Resins for INKS								
BENALAC	**Oil type**	**Oil %**	**Solvent**	**Solids %**	**Visc. [G.H.]**	**A.V. Solids**	**Colour [G.H.] max.**	**Suggested uses**
UR 81	Linseed	78	---	100	Z3 - Z5	0 - 1	9	Particularly recommended for fast drying “off set” inks. Wood stains with very good impregnating properties and suitable to cut the viscosity in high solid systems conforming to **VOC CE 2004-42.** Suitable also for pigmented pastes and to improve the brush ability of the final paint.
5660	Special Fatty Acids	70	---	100	30000-37000*	6 - 15	5	Non yellowing air drying binder suitable for “off set” inks, with excellent wetting power, good setting, drying and scuff resistance properties.

*=viscosity brookfield mPas 25°C

BENASEDO S.p.A.

index

BENASOL – THIXOTROPIC ALKYDS RESINS												
								Applications				
BENASOL	Fatty acid type	Oil %	Solvent	Solids %	Visc. [G.H.]	A.V. Solids	Colour [G.H.] max.	Air	Bake	Nitro	Catalyz.	**Suggested used**
GEL 220	Special Fatty Acids	55	WHITE SPIRIT AROMATIC FREE	50	Gel	6 - 15	9	■				Soft-gel fast drying alkyd resin with medium thixotropic behaviour, endowed with very good flow, body, colour retention and anti sagging properties. Employed alone or combined with medium-long oil alkyd resins to formulate enamels or paints for wood and “do it Your self” applications.

POLIFEN – PHENOLIC RESINS

POLIFEN	Type	Solvent	Solids %	Viscosity	Colour	Applications: Bake	Suggested uses
365	Hydro - dilutable Phenolic Resin	BUTYL GLYCOL BUTYL DIGLYCOL	60	Z – Z3 [Gardner Holdt.]	8 [Gardner Hellige]	■	Resin suggested in combination with w/b epoxy resins to produce pigmented enamels suitable for drums interior parts. Conforming to **FDA 21 CFR 175.300.**
410	Phenolic Resin Solution	BUTANOL	45	25”-40” [Cup Ford 4 25°C]	Yellow Brown	■	Resin endowed with good reactivity, adhesion on aluminium and tin plates. Suggested in combination with type 1007 and 1009 epoxy resins.
2090	Etherified Non-plasticized Phenolic Resin	BUTANOL TOLUENE (4/1)	58	340 - 590 mPas [Brookfield]	5 [Gardner Hellige]	■	Particularly suitable for gold can coating paints and for high chemical resistance enamels for industrial applications. Conforming to **FDA 21 CFR 175.300.**
6120	High solid Phenolic Resin BPA & BADGE Free	BUTANOL	80	100 - 200 mPas [Brookfield]	50 max. [Lovibond]	■	Resin with high Flexibility, Adhesion and Chemical Resistance. Particularly suitable for Can Coating applications.

EPOFEN – EPOXY_PHENOLIC RESINS												
								Applications				
EPOFEN	**Type**		**Solvent**	**Solids %**	**Viscosity [Brookfield] mPa.s**		**Colour**		**Bake**			**Suggested uses**
254	Pre-Condensed Epoxy Phenolic		BUTANOL NAPHTA BUTYL GLYCOL	37	700 -1100		Yellow Orange		■			Resin endowed with high Flexibility, particularly suitable for indoor/outdoor lacquers and enamels for Can Coating applications. Conforming to **FDA 21 CFR 175.300.**
2319	Pre-Condensed Epoxy Phenolic		BUTANOL PMA TOLUENE	41	450 - 950		4 max. [G.H.]		■			Particularly suitable for packaging and for wash coat applications for metals.
W 1205	Self - curing Epoxy Phenolic W/B dispersion,		WATER ETHERGLYCOL ALCOHOLS	29	500-3500		Milky white		■			Polymer suitable for “pasteurization” resistant can coating lacquers and enamels, eventually combined with melamine resins. Conforming to **FDA 21 CFR 175.300.**

EPOSOL – SPECIAL RESINS

								Applicazioni				
EPOSOL	**Type**		**Solvent**	**Solids %**	**Viscosity [Brookfield] mPa.s**		**Colour**		**Bake**			**Usi suggeriti**
7	Epoxy Resin. Medium – High Molecular Weight		BUTYLGLYCOL SOLVESSO 100	40	450-700		< 8 [Lovibond]		■			Suitable for lacquers and enamels for can coating and drums applications when properly combined with Phenolic and/or Melamine binders.
9	Epoxy Resin. High molecular weight		BUTYLGLYCOL SOLVESSO 100	41	900-1500		< 8 [Lovibond]		■			Resin that shows higher Flexibility, Hardness and Chemical Resistance than Eposol 7, suggested in combination with Phenolic, Melamine or Polyamide binders.
AP 100	Adhesion Promoter		BUTYL GLYCOL	63	Y-Z2 [Gardner.H		3 max. [G.H.]		■			Epoxy modified additive, suitable for improving adhesion and reactivity on different metal substrates, particularly for baking system.

IDROBEN – EPOXY ACRILIC RESINS												
								Applications				
IDROBEN	**Type**		**Solvent**	**Solids %**	**Viscosity [Brookfield] mPa.s**		**Colour**		**Bake**			**Suggested uses**
E 530	Self – Curing Epoxy Resin		BUTYLGLYCOL WATER	30	900-3500		Milky White		■			Resin endowed with very good adhesion and anticorrosive properties on zinc, steel and aluminium, also in combination with Methoxy Melamine resins. Suitable for " pasteurization " resistant lacquers and enamels to be used in can coating applications. Conforming to **FDA 21 CFR 175.300.**
2643	Epoxy Acrilic Resin		BUTYL GLYCOL WATER BUTANOL	23	30"-90" [Cup Ford 4 25°C]		Milky White		■			Resin endowed with very good adhesion and anticorrosive properties on zinc, steel and aluminium, when combined with Methoxy - Melamine resins. Very good adhesion on glass. Suitable for " pasteurization " resistant lacquers and enamels to be used in can coating applications. Conforming to **FDA 21 CFR 175.300.**

GENERAL INFORMATION	
SOLIDS CONTENT (according to BN1-Benasedo)	It is determined at 150°C for 15 minutes on a thermostatic hot plate. The precision of this value is +/- 1%.
VISCOSITY (according to ASTM D 1545) (according to ASTM D 2196)	It is expressed according to Gardner-Holdt scale letters, determined at 25°C. It is expressed according to Brookfield Viscosimeter, in mPa.s., at 25°C.
ACID VALUE (according to ASTM D 29)	It is expressed in mg of KOH per gram of solid resin.
COLOUR (according to ASTM D 1544)	It is expressed according to Gardner-Hellige Varnish Comparator.
(OH) % CONTENT	It is expressed in (OH) equivalent grams per 100 grams of solid resin.
(NCO) % CONTENT (according to ASTM D 1638)	It is expressed in (NCO) equivalent grams per 100 grams of polyisocyanate.
FREE ISOCYANIC MONOMER	It is expressed in parts per 100 gr of polyisocyanate, as it is, and determined by G.P.C..
FUNCTIONALITY OF RADIATION CURING PRODUCTS	It means the number of acrylic double-bounds per mole.

BENASEDO

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