ABWAB AL JAZEERA

Polyester Resins Catalog

ABWAB CORPORATION

Trusted experts. Proven reliability. Simply ABWAB.

ABWAB Corporation is a chemical and petrochemical products supplier in the middle east region. Since its foundation the company has well established co-operation with some leaders of the industry and focused on some highly demanded areas such as Green Chemistry and Selective Catalytic Reduction Solutions as well as Painting industry products and solutions including but not limited to:

Water Based resins
Solvent based Resins
Alkyd Resins
Acrylic Resins
MMA Resins
Poly-enamels Resins
Polyurethan Resins
Saturated & Unsaturated Polyester Resins

Water Based Paints

Industrial paints
Constructional Paints
Wood Paints
Marine Paints
Epoxy floor coatings
Traffic Paints

Poly-enamels

Processed aluminum silicate
Glass beads
Polyester Resins

Table Of Contents

Polyester Resins :

The **applications of the polyester resins** are varied. **The polyester resins** in fact represent one of the absolute compounds used in a wide range of industries. The most important, as well as those illustrated above, are:

- Composite materials
- Wood paints
- Flat laminated panels, corrugated panels, ribbed panels
- Gel coat for boats, automotive and bathroom fixtures
- Coloring pastes, fillers, stucco, putties and chemical anchorings
- Self-extinguishing composite materials
- Quartz, marble and artificial cement

In this Catalog we are focusing on different Poly ester Resins which is supplied by ABWAB CORPORATION along with their applications and technical data.

ISOPHTHALIC

Isophthalic unsaturated polyester Resin **UP-110**
Isophthalic unsaturated polyester Resin **UP-112**
Isophthalic unsaturated polyester Resin **UP-201**
Isophthalic unsaturated polyester Resin **UP-204**
Isophthalic unsaturated polyester Resin **UP-231**

ORTHOPHTALIC

Orthophthalic unsaturated polyester Resin **UP-300**
Orthophthalic unsaturated polyester Resin **UP- 401**
Orthophthalic unsaturated polyester Resin **UP- 403**
Orthophthalic unsaturated polyester Resin **UP- 473**
Orthophthalic unsaturated polyester Resin **UP- 503**
Orthophthalic unsaturated polyester Resin **UP- 510**
Orthophthalic unsaturated polyester Resin **UP- 630**
Orthophthalic unsaturated polyester Resin **UP- 720**
Orthophthalic unsaturated polyester Resin **UP- 903**
Orthophthalic unsaturated polyester Resin **UP- 970**
Orthophthalic unsaturated polyester Resin **UP- 972**
Orthophthalic unsaturated polyester Resin **UP- 972B**
Orthophthalic unsaturated polyester Resin **UP- 973**
Orthophthalic unsaturated polyester Resin **UP- 975**
Orthophthalic unsaturated polyester Resin **UP- 976**
Orthophthalic unsaturated polyester Resin **UP- 977**
UV curing Unsaturated Polyester Resin **UP-1100**
Flame Retardant unsaturated polyester Resin **UP-2000**

TEREPHTHALIC

terephthalic unsaturated polyester Resin **UP-509**
terephthalic unsaturated polyester Resin **UP-801**

PRE-ACCELARATOR

Pre-accelerated unsaturated polyester Resin **UP-971**

VINYLESTER

Vinylester Resin **VE-200**
Vinylester Resin UV - cure **VE-200UV - cure**
Vinylester Resin **VE-300**
Vinylester Resin **VE-400**
Vinylester Resin **VE-580**
Elastomer modified Vinylester Resin **VE-600**

MASTIC

UV Curable Mastic **UV-2000**
UV Curable Mastic **UV-2100**
UV Curable Mastic **UV-2200**

SHIRINKAGE

Low Profile Resin **LP-100**
Low Profile Resin **LP-200**

Isophthalic unsaturated polyester Resin

UP-110

Chemical / physical nature

UP – 110 is an Isophthalic unsaturated polyester resin with high reactivity and consumer's required viscosity. This resin has a high resistance to weather conditions and UV due to its chemical nature and its additives.

Major applications

UP–110 is intended for production of SMC, BMC due to its high reactivity. Thixotropic resin can be prepared easily and it is compatible with shrinkage reducing agent. In addition low viscos and medium viscos UP-110 resin can be used in composite materials produced by spray and hand lay-up methods.

Storage

UP–110 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP–110 will be 4 month ex work.

Specification

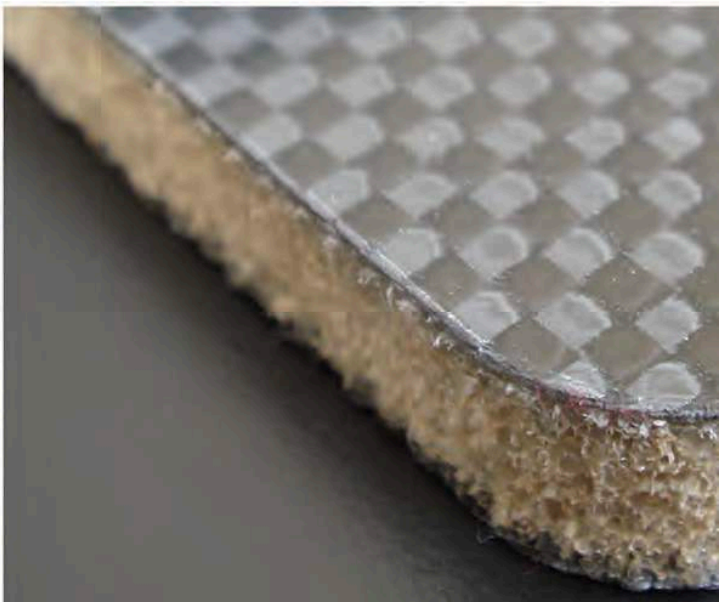
specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	60 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity of SMC BMC resin	700-1100	cps	ISO 2555
Viscosity of spray resin	200-300	cps	ISO 2555
Viscosity of Hand lay-up resin	400-600	cps	ISO 2555
Density	1.12±0.5%	g/cm3	ISO 1675
Gel time *	140-190	min	*
Exothermic Peak	250-285	°C	*
Exothermic time	200-260	Min	*

* 100 gr resin UP – 110 with 1-1.5 gr TBPB (Trigonex-C) at 80-100 °C.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	75-85	MPa	ISO 527
Tensile modulus	6-7	GPa	ISO 527
Elongation at break	4-6	Percent	ISO 527
HDT	110 ± 2	C°	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1.5% and MEKP: 1.5%
Post cure: 24 hours at room temperature and 2 hour at 80 °C.



Isophthalic unsaturated polyester Resin

UP-112

Chemical / physical nature

UP – 112 is an Isophthalic unsaturated polyester resin with superior reactivity and high viscosity.

Major applications

UP–112 is designed for production of SMC, BMC. Thixotropic resin can be prepared using magnesium oxide. In addition UP–112 resin exhibiting excellent wettability to pigments and it is compatible with shrinkage reducing agents

Storage

UP – 112 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 112 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	60 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity of SMC,BMC resin	900-1200	cps	ISO 2555
Density	1.12±0.5%	g/cm3	ISO 1675
Gel time *	120-190	min	*
Exothermic Peak	250-280	°C	*
Exothermic time	250-300	min	*

* 100 gr resin UP – 112 with 1-1.5 gr TBPB (Trigonex-C) at 80-100 °C.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	75-85	MPa	ISO 527
Tensile modulus	5-6	GPa	ISO 527
Elongation at break	4-6	Percent	ISO 527
HDT	95 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1.5% and MEKP: 1.5%
Post cure: 24 hours at room temperature and 2 hour at 80 °C.

Isophthalic unsaturated polyester Resin

UP-201

Chemical / physical nature

UP – 201 is an Isophthalic unsaturated polyester resin with high reactivity and medium viscosity. This resin has a high resistance to weather conditions and UV due to its chemical nature and its additives.

Major applications

UP – 201 is intended for production of fiber-glass composite materials due to its excellent chemical and hydrolysis resistance, including liquid transfer pipes, chemical storage tanks, boats used in tropical seas and so on.

Storage

UP – 201 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 201 will be 4 month ex work.

Specification			
specific	amount	unit	standard
Solvent	Styrene		
Appearance	Clear		
Solid content	58 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	
Viscosity	300-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	8-15	min	*
Exothermic Peak	170-185	°C	*
Exothermic time	15-30	Min	*

* 100 gr resin UP – 201 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Properties of cast resin			
Property	Value	Unit	Standard
Tensile strength	75-95	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	4-7	Percent	ISO 527
HDT	80 ± 2	°C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP: 1% Post cure: 25 hour at room temperature and 2 hour at 80 °C

Isophthalic unsaturated polyester Resin

UP-204

Chemical / physical nature

UP – 204 is an isophthalic unsaturated polyester resin with medium viscosity, high reactivity and good resistance to weather conditions and UV.

Major applications

UP–204 is designed for use in Pultrusion systems. However, this resin can be used in other systems, such as hand lay-up and filament winding.

Storage

UP – 204 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP–204 will be 4 month ex work.

Specification			
specific	**amount**	**unit**	**standard**
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	62 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	1-3	min	*

* 100 gr resin UP – 204 with 1-3 gr benzoyl peroxide, mold temperature: 100-150 °C

Properties of cast resin			
Property	Value	Unit	Standard
Tensile strength	80-90	MPa	ISO 527
Tensile modulus	3-5	GPa	ISO 527
Elongation at break	5-7	Percent	ISO 527
HDT	90 ± 2	°C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C.

Isophthalic unsaturated polyester Resin

UP-231

Chemical / physical nature

UP – 231 is a resin based on Isophthalic acid and neopentyl glycol, modified by acrylic monomers with medium viscosity, high reactivity, and high resistance to weather conditions and UV.

Major applications

UP – 231 is intended for production of solid surface stones due to its chemical nature and high chemical and optical resistance.

Storage

UP – 231 should be storage indoors in original Unopened and undamaged containers in a dry place between 5 to 25 degrees Celsius. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 231 will be 4 month ex work.

Specification

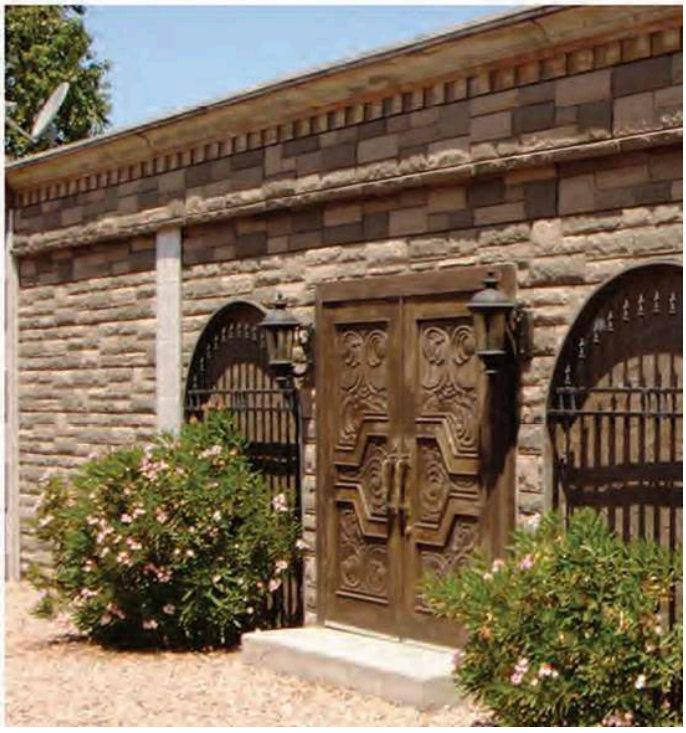
specific	amount	unit	standard
Solvent	Styrene & acrylic monomer	-	-
Appearance	Clear	-	-
Solid content	60 ± 3	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	
Viscosity	300-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*
Exothermic Peak	170-190	˚C	*
Exothermic time	20-35	Min	*

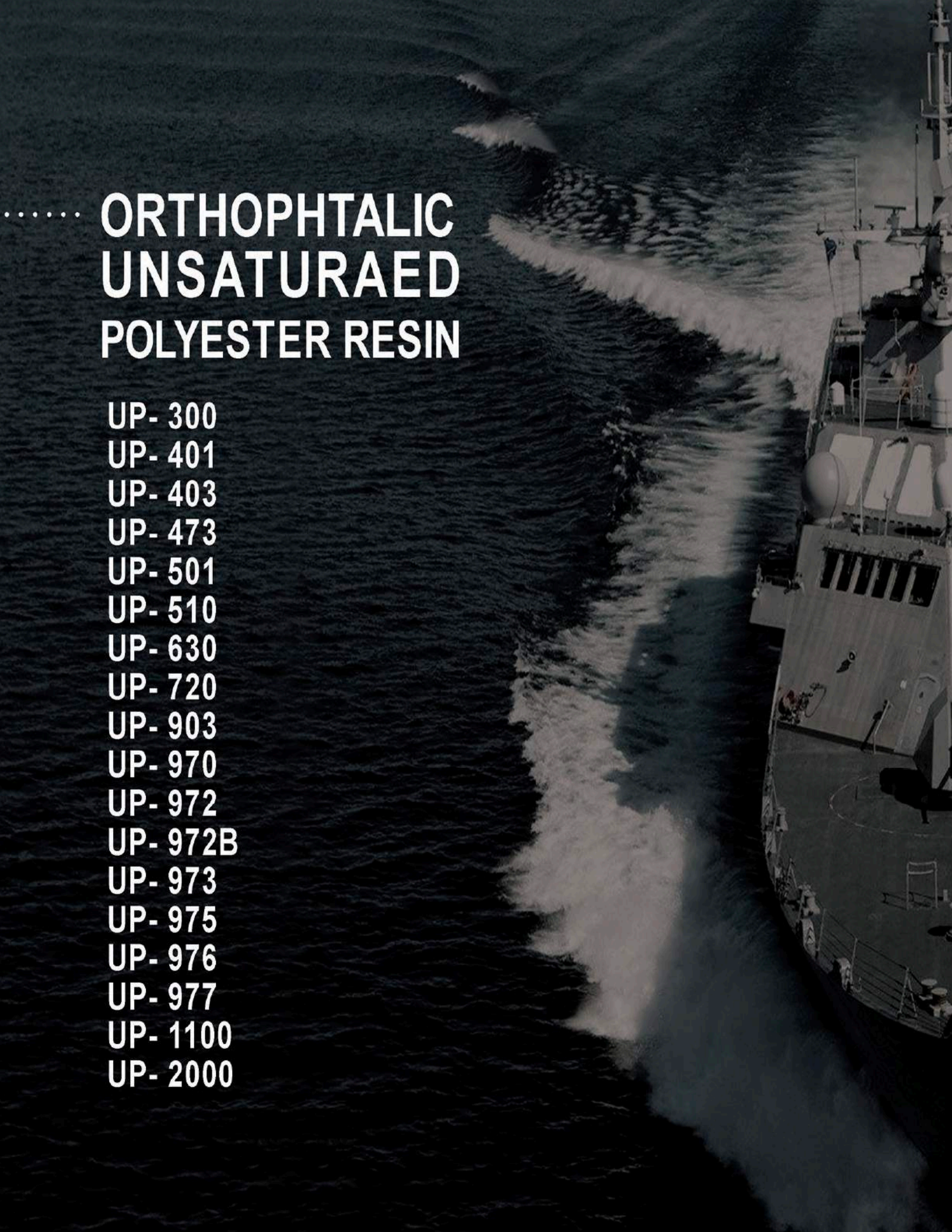
* 100 gr resin UP – 231 with 0.5 gr colorless cobalt 6% metal and 1 gr MEKP at 25˚C

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	70-90	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	6-7	Percent	ISO 527
HDT	90±2	˚C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*100 gr resin with 0.5 gr colorless cobalt 6% metal and 1 gr MEKP
Post cure: 24 hour at room temperature and 2 hour at 80 ˚C





ORTHOPHTALIC UNSATURAED POLYESTER RESIN

- UP- 300
- UP- 401
- UP- 403
- UP- 473
- UP- 501
- UP- 510
- UP- 630
- UP- 720
- UP- 903
- UP- 970
- UP- 972
- UP- 972B
- UP- 973
- UP- 975
- UP- 976
- UP- 977
- UP- 1100
- UP- 2000

Orthophthalic unsaturated polyester Resin

UP-300

Chemical / physical nature

UP – 300 is a resin based on orthophthalic anhydride with high viscosity, low reactivity, and high flexibility and light color.

Major applications

UP – 300 is intended for manufacturing of Polyester button production of buttons and large parts molding. In button industry, production can be done via molding and centrifuge method.

Storage

UP – 300 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 300 will be 4 month ex work.

Specification			
specific	**amount**	**unit**	**standard**
Solvent	Styrene	----	----
Appearance	Viscose liquid	----	----
Solid content	70 ± 2	Percent	ISO 3251
Acid value	Max 45	mg KOH/g	ISO 2114
Viscosity	800 - 1200	cps	ISO 2555
Density	1.13 ±0.5%	g/cm3	ISO 1675
Gel time *	8 - 10	min	*
Exothermic Peak	110 - 140	°C	*
Exothermic time	14 - 18	minute	*

* 100 gr resin UP – 300 with 4 gr cobalt octoate 0.1% metal and 1 gr MEKP at 25°C.

Orthophthalic unsaturated polyester Resin

UP- 401

Chemical / physical nature

UP – 401 is an Orthophthalic unsaturated polyester resin with high reactivity and medium Viscosity.

Major applications

The UP-401 is intended for production of fiberglass composite materials with appropriate mechanical properties for piping application, automotive industry, phone booths, etc.

Specification			
Property	**Value**	**Unit**	**Standard**
Tensile strength	60-80	MPa	ISO 527
Tensile modulus	4-7	GPa	ISO 527
Elongation at break	3-6	Percent	ISO 527
HDT	70 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

Storage

UP – 401 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 401 will be 4 month ex work.

Specification			
specific	**amount**	**unit**	**standard**
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 30	mg KOH/g	ISO 2114
Viscosity	400-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*
Exothermic Peak	170-190	°C	*
Exothermic time	15-30	minute	*

100 gr resin UP – 401 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Orthophthalic unsaturated polyester Resin

UP- 403

Chemical / physical nature

UP – 403 is an Orthophthalic unsaturated polyester resin with high reactivity and low to medium viscosity.

Major applications

The UP-403 is intended for production of fiberglass composite materials with appropriate mechanical properties for piping application, automotive industry, phone booths, etc.

Specification

Property	Value	Unit	Standard
Tensile strength	65 - 85	MPa	ISO 527
Tensile modulus	4 - 7	GPa	ISO 527
Elongation at break	2 - 5	Percent	ISO 527
HDT	85 ± 2	°C	ISO 75
Hardness	30 - 40	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C

Storage

UP – 403 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

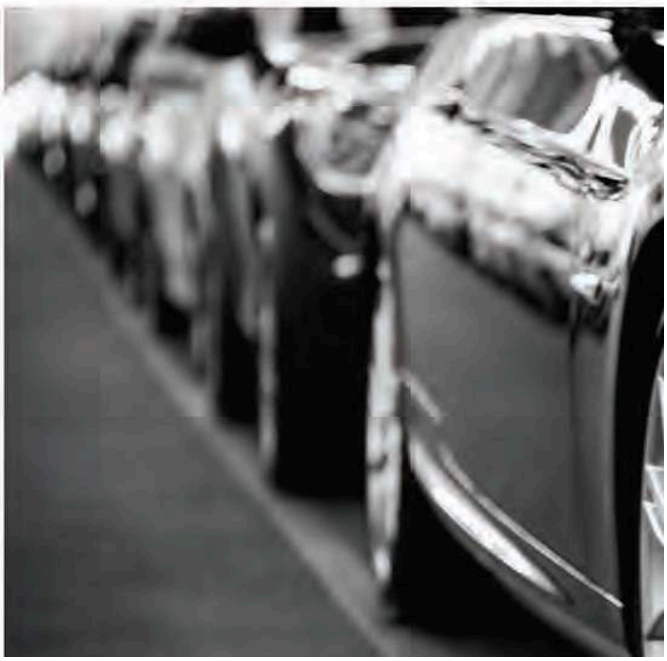
Stability

Under the above mentioned storage condition the stability of UP – 403 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Solid content	63 ± 2	Percent	ISO 3251
Acid value	Max 30	mg KOH/g	ISO 2114
Viscosity	300 - 600	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time	14 - 18	min	*
Exothermic Peak	170-190	°C	*
Exothermic time	25-35	minute	*

* 100 gr resin UP – 403 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.



Orthophthalic unsaturated polyester Resin
UP- 473

Chemical / physical nature

UP – 473 is an Orthophthalic unsaturated polyester resin with moderate reactivity and consumer's required viscosity.

Major applications

The UP-473 polyester is an appropriate resin for mastics are used in stone factories and reinforcing decorative stones (marble and travertine stones). Also due to its high flexibility, this resin is invented sheet moulding compounds and other general fiberglass applications.

Specification

Property	Value	Unit	Standard
Tensile strength	50-70	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	3-6	Percent	ISO 527
HDT	50 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C

Storage

UP – 473 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 473 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	-	-
Appearance	Clear	-	-
Solid content	63 ± 2	Percent	ISO 3251
Acid value	Max 30	mg KOH/g	ISO 2114
Viscosity	300-700	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time	10-20	min	*
Exothermic Peak	165-180	°C	*
Exothermic time	20-40	minute	*

* 100 gr resin UP – 473 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Orthophthalic unsaturated polyester Resin

UP- 501

Chemical / physical nature

UP – 501 is an Orthophthalic unsaturated polyester resin with high reactivity and medium Viscosity.

Major applications

The UP-501 is intended for production of fiberglass composite materials with appropriate mechanical properties for piping application, automotive industry, phone booths, etc.

Specification

Property	Value	Unit	Standard
Tensile strength	65-75	MPa	ISO 527
Tensile modulus	4-7	GPa	ISO 527
Elongation at break	4-7	Percent	ISO 527
HDT	67 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C

Storage

UP – 501 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 501 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	-	-
Appearance	Clear	-	-
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time	10-20	min	*
Exothermic Peak	160-180	°C	*
Exothermic time	15-30	minute	*

* 100 gr resin UP – 501 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Orthophthalic unsaturated polyester Resin

UP- 510

Chemical / physical nature

UP – 510 is an Orthophthalic unsaturated polyester resin with medium reactivity and consumer's required viscosity.

Major applications

The UP-510 is intended for production of Cultured or synthetic marble stones with calcium carbonate as filler.

Specification			
Property	**Value**	**Unit**	**Standard**
Tensile strength	50-70	MPa	ISO 527
Tensile modulus	3-5	GPa	ISO 527
Elongation at break	4-6	Percent	ISO 527
HDT	50 ± 2	˚C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hours at room temperature and 2 hour at 80 ˚C.

Storage

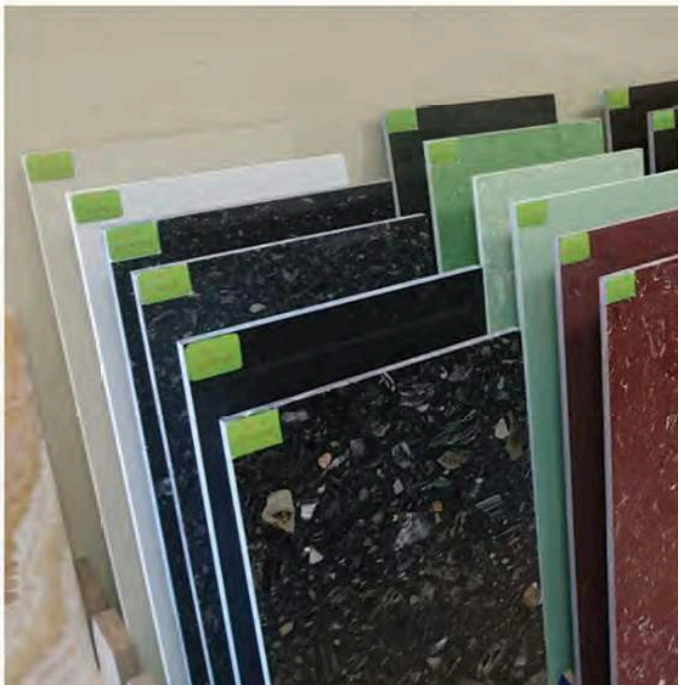
UP – 510 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 ˚C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 510 will be 4 month ex work.

Specification			
specific	**amount**	**unit**	**standard**
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	63 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	200-500	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time	20-30	min	*
Exothermic Peak	110-140	˚C	*
Exothermic time	30-50	Min	*

* 100 gr resin UP – 510 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25˚C.



Orthophthalic unsaturated polyester Resin

UP- 630

Chemical / physical nature

UP – 630 is an Orthophthalic unsaturated polyester resin with high reactivity and consumer's required viscosity.

Major applications

The UP-630 is a high quality resin intended for special applications including marble stones and automotive industry.

Specification

Property	Value	Unit	Standard
Tensile strength	60 - 80	MPa	ISO 527
Tensile modulus	2 - 4	GPa	ISO 527
Elongation at break	3 - 5	Percent	ISO 527
HDT	75 ± 2	˚C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 ˚C.

Storage

UP – 620 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 ˚C. Exposure to sunlight should be avoided.

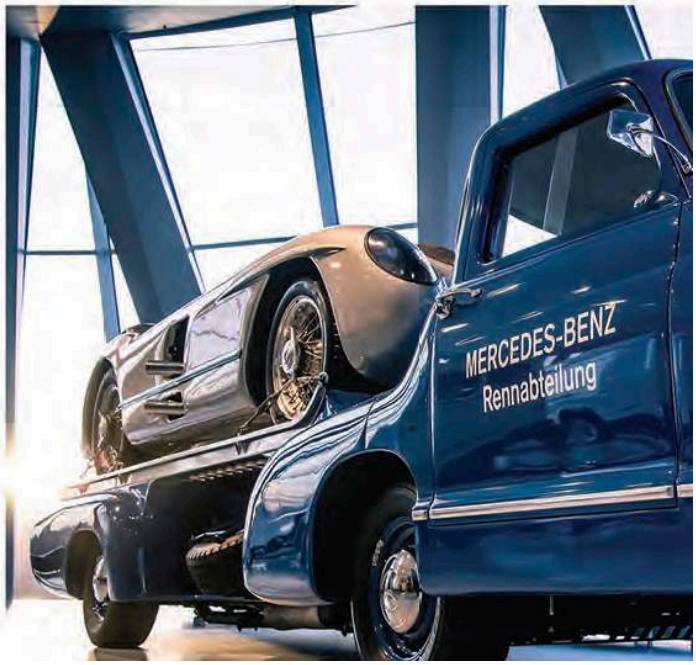
Stability

Under the above mentioned storage condition the stability of UP – 620 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Solid content	60 ± 2	Percent	ISO 3251
Acid value	Max 42	mg KOH/g	ISO 2114
Viscosity	200 - 500	cps	ISO 2555
Density	1.13 ±0.5%	g/cm3	ISO 1675
Gel time	10 - 20	min	*
Exothermic Peak	180 - 200	˚C	*
Exothermic time	15 - 40	minute	*

* 100 gr resin UP – 630 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25˚C.



Orthophthalic unsaturated polyester Resin

UP- 630

Chemical / physical nature

UP – 720 is an Orthophthalic unsaturated polyester resin with medium reactivity and suitable viscosity for produce artificial stone by Breton

Major applications

The UP-720 is intended for production of artificial stone and marble stone that produce by Berton technology.

Specification			
Property	**Value**	**Unit**	**Standard**
HDT	60 ± 2	°C	ISO 75
Hardness	Min 42	Barcol	ASTM D 2583

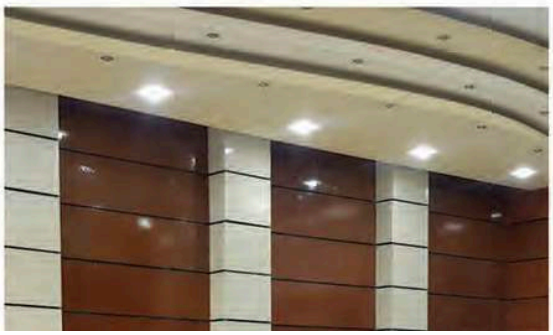
*100 gr resin with cobalt octoate 1% metal 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C.

Storage

UP – 720 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

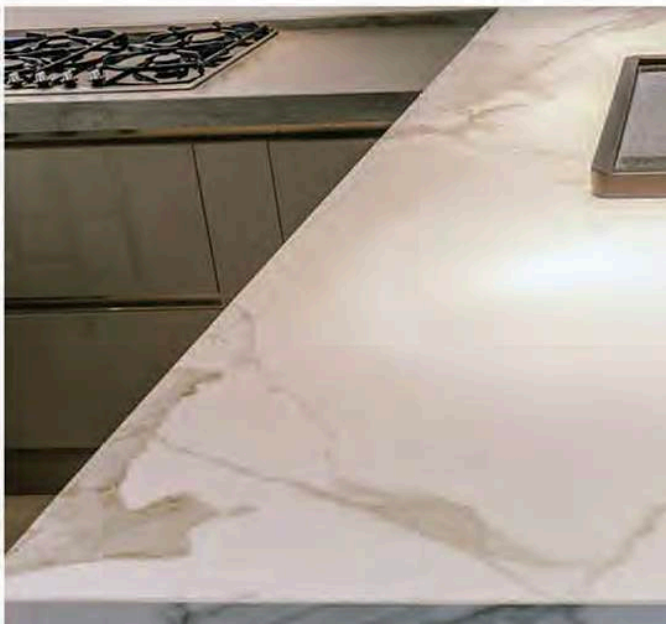
Stability

Under the above mentioned storage condition the stability of UP – 720 will be 4 month ex work.



Specification			
specific	**amount**	**unit**	**standard**
Solvent	Styrene	-	-
Appearance	Clear	-	-
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	650-800	cps	ISO 2555
Density	1.12±0.5%	g/cm3	ISO 1675
Gel time *	5-9	min	*
Exothermic Peak	195-230	°C	*
Exothermic time	8-15	minute	*

* 100 gr resin UP – 720 with 0.2 gr cobalt octoate 6% metal and 2 gr TBPB (Trigonox 93) in water bath at 80°C.



Orthophthalic unsaturated polyester Resin

UP- 903

Chemical / physical nature

UP – 903 is an orthophthalic unsaturated polyester resin with medium viscosity, high reactivity and good mechanical properties.

Major applications

UP – 903 is intended for mastic resin in continuous systems. This resin has a high dilute ability by solvent and excellent powder absorption. The mastic produced from this resin has excellent and stable thixotropic properties. In order to cure the produced mastic, it is necessary to add about 0.1% amine (such as dimethyl aniline) and 1-2 % benzoyl peroxide paste. In addition UP – 903 can be used well in a variety of methods such as hand lay-up, pultrusion, filament winding and other forming techniques.

Specification

Property	Value	Unit	Standard
Tensile strength	60-80	MPa	ISO 527
Tensile modulus	4-6	GPa	ISO 527
Elongation at break	2-4	Percent	ISO 527
HDT	70 ± 2	˚C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hours at room temperature and 2 hour at 80 ˚C.

Storage

UP – 903 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 ˚C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 903 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	63 ± 2	Percent	ISO 3251
Acid value	Max 30	mg KOH/g	ISO 2114
Viscosity	400-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*
Exothermic Peak	175-195	˚C	*
Exothermic time	20-30	Min	*

* 100 gr resin UP – 903 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25˚C.

Orthophthalic unsaturated polyester Resin
UP- 970

Chemical / physical nature

UP – 970 is an Orthophthalic unsaturated polyester resin with moderate reactivity.

Major applications

The UP-970 is intended for sheet production, including plain sheets, roller shutter, etc.

Specification

Property	Value	Unit	Standard
Tensile strength	60-80	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	4-5	Percent	ISO 527
HDT	65 ± 2	˚C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 ˚C

Storage

UP – 970 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 ˚C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 970 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	------	------
Appearance	Viscos liquid	------	------
Solid content	62 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-600	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	20-30	min	*
Exothermic Peak	160-180	˚C	*
Exothermic time	30-45	minute	*

* 100 gr resin UP – 970 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25˚C.

Orthophthalic unsaturated polyester Resin

UP- 972

Chemical / physical nature

UP – 972 is an Orthophthalic unsaturated polyester resin with moderate reactivity and consumer's required Viscosity.

Major applications

The UP-972 polyester is an appropriate resin for mastics are used in stone factories and reinforcing decorative stones (marble and travertine stones). Also due to its high flexibility, this resin is invented for sheet molding compounds and other general fiberglass applications.

Specification			
Property	Value	Unit	Standard
Tensile strength	50-70	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	4-5	Percent	ISO 527
HDT	50 ± 2	°C	ISO 75
Hardness	Min 30	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C

Storage

UP – 972 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 972 will be 4 month ex work.

Specification			
specific	amount	unit	standard
Solvent	Styrene	------	------
Appearance	Clear	------	------
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	200-500	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*
Exothermic Peak	150-170	°C	*
Exothermic time	20-40	minute	*

* 100 gr resin UP – 972 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Orthophthalic unsaturated polyester Resin

UP - 972B

Chemical / physical nature

UP – 972B is an Orthophthalic unsaturated polyester resin with moderate reactivity and consumer's required viscosity.

Major applications

The UP-972B polyester is an appropriate resin for mastics are used in stone factories and reinforcing decorative stones (marble and travertine stones). Also due to its high flexibility, this resin is invented for sheet molding compounds and other general fiberglass applications.

Specification

Property	Value	Unit	Standard
Tensile strength	50-70	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	4-5	Percent	ISO 527
HDT	55 ± 2	˚C	ISO 75
Hardness	Min 30	Barcol	ASTM D 2583

*cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 ˚C

Storage

UP – 972B should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 ˚C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 972B will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	-------	-------
Appearance	Clear	-------	-------
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-700	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*
Exothermic Peak	140-160	˚C	*
Exothermic time	20-40	minute	*

* 100 gr resin UP – 972B with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25˚C.

Orthophthalic unsaturated polyester Resin

UP-973

Chemical / physical nature

UP – 973 is an Orthophthalic unsaturated polyester resin with moderate reactivity and consumer's required viscosity.

Major applications

The UP-973 is intended for production of fiberglass composite materials with appropriate mechanical properties for resin figure products, prefabricated houses, phone booths, etc.

Specification

Property	Value	Unit	Standard
Tensile strength	55-65	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	4-5	Percent	ISO 527
HDT	60 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C.

Storage

UP – 973 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 973 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	------	------
Appearance	Clear	------	------
Solid content	67 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	200-500	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*
Exothermic Peak	150-170	°C	*
Exothermic time	20-40	minute	*

* 100 gr resin UP – 973 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Orthophthalic unsaturated polyester Resin

UP-975

Chemical / physical nature

UP – 975 is an orthophthalic unsaturated polyester resin with medium viscosity, medium reactivity and mechanical properties. This resin has good UV resistance.

Major applications

UP – 975 is intended for mastic resin in non-continuous systems. This resin has a high dilute ability by solvent and excellent powder absorption. The mastic produced from this resin has excellent and stable thixotropic properties. In order to cure the produced mastic, it is necessary to add about 0.1% amine (such as dimethyl aniline) and 1-2 % benzoyl peroxide paste.

Specification

Property	Value	Unit	Standard
Tensile strength	60-85	MPa	ISO 527
Tensile modulus	3-6	GPa	ISO 527
Elongation at break	3-7	Percent	ISO 527
HDT	50 ± 2	°C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

*cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hours at room temperature and 2 hour at 80 °C.

Storage

UP – 975 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 975 will be 4 month ex work.

Specification

Property	Value	Unit	Standard
Solvent	Styrene	-------	-------
Appearance	Clear	-------	-------
Solid content	63 ± 2	Percent	ISO 3251
Acid value	Max 45	mg KOH/g	ISO 2114
Viscosity	400-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	18-20	min	*
Exothermic Peak	140-165	°C	*
Exothermic time	25-35	min	*

* 100 gr resin UP – 975 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

air drying unsaturated polyester Resin

UP-976

Chemical / physical nature

UP – 976 is an unsaturated polyester resin based on Orthophthalic acids and special alcohols. This resin lacks the paraffin, and the glossy surface will achieve after applying the resin.

Major applications

The UP-976 is intended for air-drying clear and pigmented wood coating used in furniture and handicrafts industry. For adjusting the gel time should not reduce cobalt, but, if necessary, use hydroquinone.

Storage

UP – 976 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

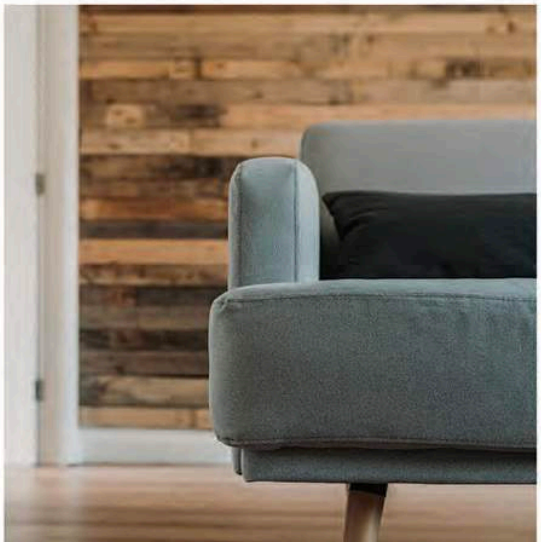
Stability

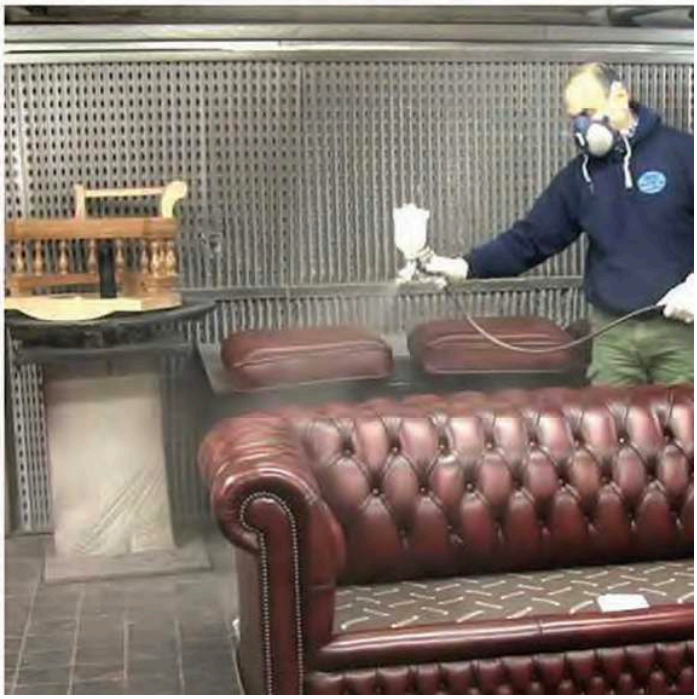
Under the above mentioned storage condition the stability of UP – 976 will be 6 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	-------	-------
Appearance	Clear	-------	-------
Solid content	60 ± 2	Percent	ISO 3251
Acid value	Max 40	mg KOH/g	ISO 2114
Viscosity	100-300	cps	ISO 2555
Density	1.1±0.5%	g/cm3	ISO 1675
Gel time *	10-20	min	*

* 100 gr resin UP – 976 with 1-2 gr cobalt octoate 1% metal and 1-2 gr MEKP at 25°C.





Orthophthalic unsaturated polyester Resin

UP-976

Chemical / physical nature

UP-977 resin is a sanding, highly reactive orthophthalic resin, having a low viscosity to be used with hardener and catalyst on wood surface. This resin is mixed with the appropriate amount of cobalt octoate and MEKP, and is sprayed several times over the wood surface with a high thickness. After drying, the surface is sanded and then completely shined by polishing.

Major applications

- Fast drying and curing
- Ability to be applied in high thickness
- Sanding ability
- Excellent shine and gloss after the final polishing
- Good weather resistanc

Storage

UP-977 should be stored indoors in original unopened and undamaged containers in a dry place at storage temperature under 25 °C.

Stability

Under the above mentioned storage condition the stability of UP-977 will be 6 month ex work.

Specification			
specific	amount	unit	standard
Appearance	Viscose liquid	-------	-------
Color	<1	Gardner	-------
Acid value	Max 50	mg KOH/g	ISO 2114
Viscosity	100-120	cP	ISO 2555
Solid content	57±2	Percent	ISO 3251
Density	1.08 ±0.01	g/cm³	ISO 1675

UV curing Unsaturated Polyester Resin

UP-1100

Chemical / physical nature

UP – 1100 is an orthophthalic high reactivity unsaturated polyester resin with medium viscosity. This resin has an optical initiator and is designed for quickly UV curing application. UP–1000 produces a non-sticky surface with very high hardness.

Major applications

UP – 1100 is intended for production of pastes, gel-coats and glass reinforced that can be cured with UV and sunshine without any catalyst.

Storage

UP – 1100 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 1100 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	------	------
Appearance	Slightly hazy	------	------
Solid content	62 ± 2	Percent	ISO 3251
Acid value	Max 30	mg KOH/g	ISO 2114
Viscosity	400-600	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	60-70	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	2-3	Percent	ISO 527
HDT	70-80	°C	ISO 75
Hardness	Min 40	Barcol	ASTM D 2583

Flame Retardant unsaturated polyester Resin

UP-2000

Chemical / physical nature

UP – 2000 is Chlorendic Anhydride (HET anhydride) based unsaturated polyester resin. The presence of ٢٧٪ of the chlorine element in this resin will resist the spread of fire.

Major applications

UP – 2000 can be used well in a variety of methods such as hand lay-up, pultrusion, filament winding and other forming techniques. In order to prevent the spread of fire, this resin is used to make the parts used in the construction and transportation.

Storage

UP – 2000 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 1000 will be 4 month ex work.

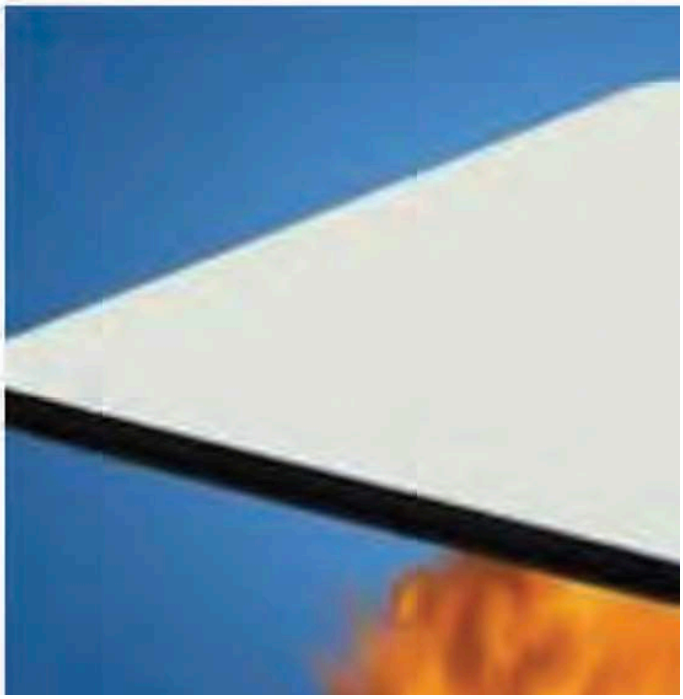
Specification

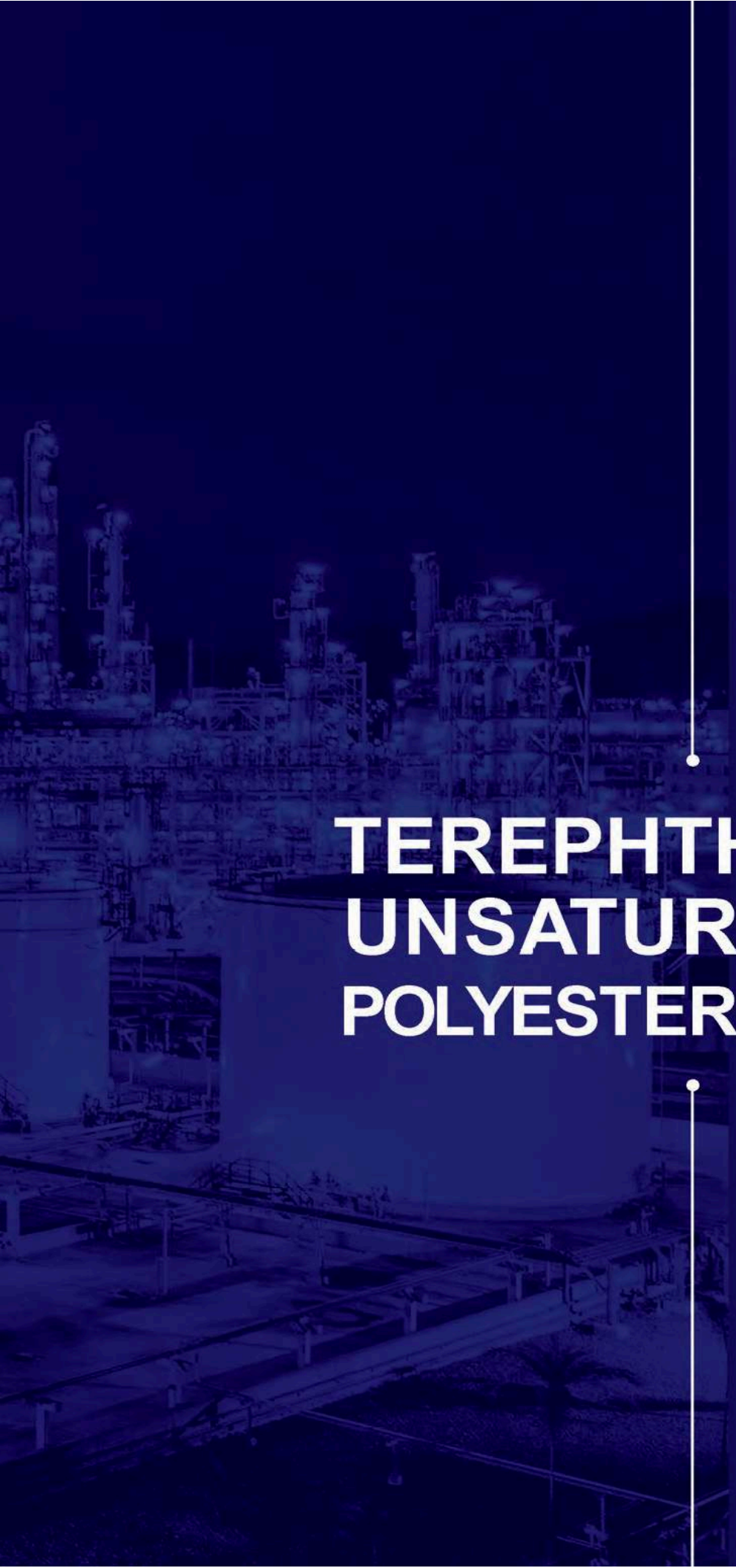
specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Clear	----	----
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	200-400	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	13-17	min	*
Exothermic Peak	160-180	°C	*
Exothermic time	15-30	Min	*

* 100 gr resin UP – 2000 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	45-50	MPa	ISO 527
Tensile modulus	3-4	MPa	ISO 527
Elongation at break	1.5-2	Percent	ISO 527
HDT	70-80	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583





TEREPHTHALIC UNSATURATED POLYESTER RESIN

UP- 509
UP- 801

terephthalic unsaturated polyester Resin

UP-509

Chemical / physical nature

UP – 509 is an terephthalic unsaturated polyester resin with high reactivity and medium Viscosity.

Major applications

The UP-509 has with specific mechanical and thermal. This resin with high HDT intended in first layer before vinyl ester and other process that need high HDT.

Storage

UP – 509 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 509 will be 4 month ex work.

Specification

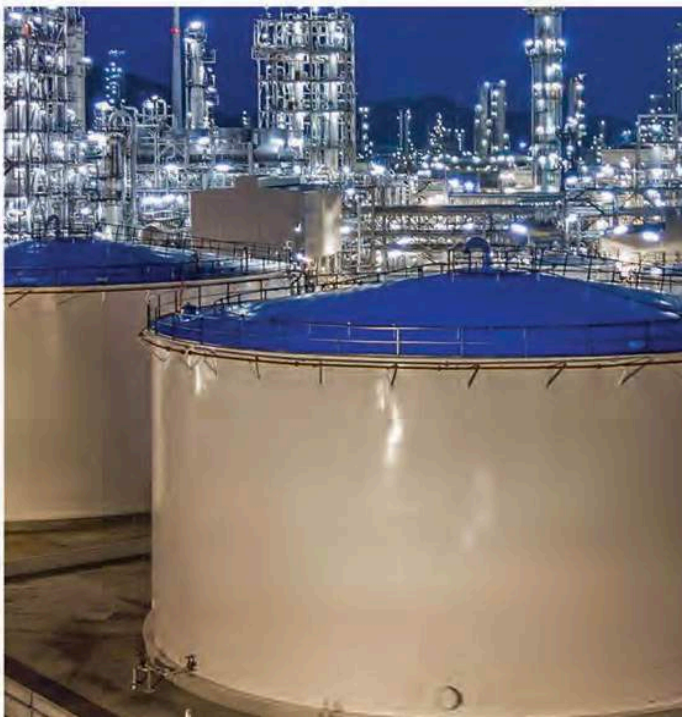
specific	amount	unit	standard
Solvent	Styrene	-	-
Appearance	Clear	-	-
Solid content	58 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	15-25	min	*
Exothermic Peak	170-195	°C	*
Exothermic time	20-35	minute	*

* 100 gr resin UP – 509 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	80-95	MPa	ISO 527
Tensile modulus	4-7	GPa	ISO 527
Elongation at break	2-4	Percent	ISO 527
HDT	120 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C.



terephthalic unsaturated polyester Resin

UP-801

Chemical / physical nature

UP – 801 is an terephthalic unsaturated polyester resin with high reactivity and medium Viscosity.

Major applications

The UP-801 has high quality for specific industrial, for example stone with high quality, automobile industrial and etc. This resin has chemical resistance in organic solvent and corrosive media and environmental condition.

Storage

UP – 801 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 801 will be 4 month ex work.

Specification

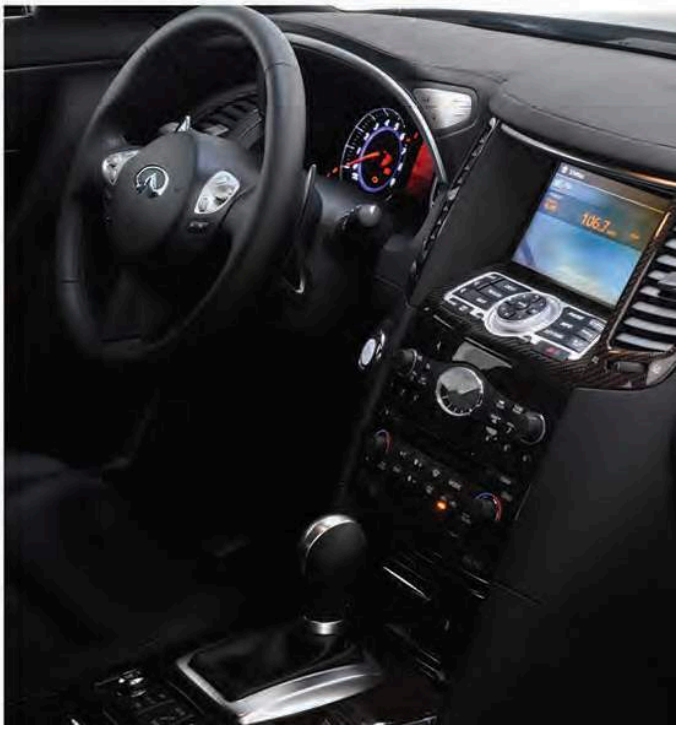
specific	amount	unit	standard
Solvent	Styrene	-	-
Appearance	Clear	-	-
Solid content	62 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-800	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	15-20	min	*
Exothermic Peak	190-220	°C	*
Exothermic time	20-40	minute	*

* 100 gr resin UP – 509 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	80-95	MPa	ISO 527
Tensile modulus	3-5	GPa	ISO 527
Elongation at break	2-4	Percent	ISO 527
HDT	120 ± 2	°C	ISO 75
Hardness	Min 35	Barcol	ASTM D 2583

*100 gr resin with cobalt octoate 1% metal : 1% and MEKP : 1%
Post cure: 24 hour at room temperature and 2 hour at 80 °C.




PRE-ACCELARATOR
UNSATURATED
POLYESTER RESIN
UP- 971

Pre-accelerated unsaturated polyester Resin

UP-971

Chemical / physical nature

UP – 971 is an unsaturated polyester resin based on special carboxylic acids, containing amine accelerator. This resin has superior flexibility.

Major applications

UP-971 is specially designed and found suitable in manufacture car body fillers and putties cured with benzoyl peroxides. Filler paste based on these resins show excellent sandability and don't rapidly clog on sand paper.

Storage

UP – 971 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UP – 971 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	------	------
Color	Clear	------	------
Solid content	70 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300-800	cps	ISO 2555
Density	1.1±0.5%	g/cm3	ISO 1675
Gel time *	12-14	min	*

* 100 gr resin UP – 971 with 2 gr benzoyl peroxide powder at 25°C.

VINYLESTER

VE- 200

VE- 200
uv cure

VE- 300

VE- 400

VE- 580

VE- 600

Vinylester Resin

VE-200

Chemical / physical nature

VE – 200 is a vinylester resin based on bi-sphenol A in styrene monomer. This resin has excellent chemical resistance to a wide range of chemicals including acids, bases and salts, making it a suitable choice to be used in corrosive environments.

Major applications

VE-200, due to good chemical and mechanical properties is intended for filament winding, centrifuge molding, and hand lay-up products.

Storage

VE-200 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of VE - 200 will be 4 month ex work.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	90-95	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	3-4	Percent	ISO 527
HDT	115 ± 5	°C	ISO 75
Hardness	Min 45	Barcol	ASTM D 2583

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Color	Brown	----	----
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300 - 500	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	5 - 10	min	*
Exothermic Peak	170 - 185	°C	*
Exothermic time	10 - 20	minute	*

* 100 gr resin VE - 200 with 2 gr cobalt octoate 1% metal and 2 gr MEKP and 0.2 gr dimethylaniline at 25°C.

Vinylester Resin UV - cure

VE-200UV - cure

Chemical / physical nature

VE – 200UV is a vinylester resin based on bi-sphenol A in styrene monomer. This resin has excellent chemical resistance to a wide range of chemicals including acids, bases and salts, making it a suitable choice to be used in corrosive environments. This resin cured by UV light and sun light.

Major applications

VE-200, due to good chemical and mechanical properties is intended for filament winding, centrifuge molding, and hand lay-up products.

Specification			
specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Color	Brown	----	----
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300 - 500	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675

Storage

VE-200UV should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of VE – 200UV will be 4 month ex work.

Properties of cast resin			
Property	Value	Unit	Standard
Tensile strength	90-95	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	3-4	Percent	ISO 527
HDT	115 ± 5	°C	ISO 75
Hardness	Min 45	Barcol	ASTM D 2583

Vinylester Resin

VE-300

Chemical / physical nature

VE – 300 is a vinylester resin based on bi-sphenol A in styrene monomer. This resin has excellent chemical resistance to a wide range of chemicals including acids, bases and salts, making it a suitable choice to be used in corrosive environments.

Major applications

VE-300, due to good chemical and mechanical properties is intended for filament winding, centrifuge molding, and hand lay-up products.

Storage

VE-300 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of VE - 300 will be 4 month ex work.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	90-95	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	3-4	Percent	ISO 527
HDT	105 ± 5	°C	ISO 75
Hardness	Min 45	Barcol	ASTM D 2583

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Color	Brown	----	----
Solid content	65 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300 - 500	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time *	10 - 20	min	*
Exothermic Peak	170 - 185	°C	*
Exothermic time	20 - 30	minute	*

* 100 gr resin VE - 300 with 2 gr cobalt octoate 1% metal and 2 gr MEKP and 0.2 gr dimethylaniline at 25°C

Novolac-based Vinylester resin

VE - 400

Chemical / physical nature

VE – 400 is a vinylester resin based on epoxy novolac in styrene monomer. This resin has excellent chemical resistance to a wide range of chemicals including acids, bases and salts, making it a suitable choice to be used in corrosive environments.

Major applications

VE-400, due to good chemical and mechanical properties is intended for the manufacture of chlorination reactors and absorption towers, using caustic soda is used. This resin is also used to coat tanks and specially transported corrosion-resistant industrial water pipes and solvent extraction devices.

Storage

VE-400 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 ˚C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of VE - 400 will be 4 month ex work.

Specification

Property	Value	Unit	Standard
Tensile strength	80-95	MPa	ISO 527
Tensile modulus	3-6	GPa	ISO 527
Elongation at break	3-4	Percent	ISO 527
HDT	145 ± 5	˚C	ISO 75
Hardness	Min 45	Barcol	ASTM D 2583

Post cure: 24 hour at room temperature and 2 hour at 100 ˚C.

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Color	Brown	----	----
Solid content	67± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	400 - 800	cps	ISO 2555
Density	1.08±0.5%	g/cm3	ISO 1675
Gel time *	10 - 20	min	*
Exothermic Peak	210 - 230	˚C	*
Exothermic time	20 - 30	minute	*

* 100 gr resin VE - 400 with 0.2 gr cobalt octoate 10% metal and 1.5 gr MEKP and 0.2 gr dimethylaniline at 25˚C.

Vinylester Resin

VE-580

Chemical / physical nature

VE – 580 is a vinylester resin based on bi-sphenol A in styrene monomer. This resin has excellent chemical resistance to a wide range of chemicals including acids, bases and salts, making it a suitable choice to be used in corrosive environments.

Major applications

VE-580, due to good chemical and mechanical properties is intended for filament winding, centrifuge molding, pultrusion and hand lay-up products including chemical tanks and pipelines.

Storage

VE-580 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of VE - 580 will be 4 month ex work.

Specification

specific	amount	unit	standard
Solvent	Styrene	----	----
Appearance	Viscos liquid	----	----
Color	Brown	----	----
Solid content	50 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300 - 600	cps	ISO 2555
Density	1.06 ±0.5%	g/cm3	ISO 1675
Gel time	20 - 30	min	*
Exothermic Peak	170 - 190	°C	*
Exothermic time	45 - 55	minute	*

* 100 gr resin VE - 580 with 1 gr cobalt octoate 1% metal and 1 gr MEKP at 25°C.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	70-95	MPa	ISO 527
Tensile modulus	3-4	GPa	ISO 527
Elongation at break	3-7	Percent	ISO 527
HDT	120 ± 5	°C	ISO 75
Hardness	Min 45	Barcol	ASTM D 2583

Elastomer modified Vinylester Resin

VE-600

Chemical / physical nature

VE – 600 is an elastomer – modified vinyl-ester resin based on bisphenol A in styrene monomer. This resin used when toughness and more flexibility are required.

Major applications

VE – 600 can be used for primer and product that need toughness and more flexibility are required.

Properties

- Excellent adhesion and abrasion resistance.
- Excellent impact resistance

Storage

VE-600 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of VE - 600 will be 4 month ex work.

Properties of cast resin

Property	Value	Unit	Standard
Tensile strength	70-95	MPa	75-95
Tensile modulus	3-5	GPa	3-5
Elongation at break	8-10	Percent	2-5
HDT	85 ± 5	°C	105 ± 5
Hardness	Min 40	Barcol	Min 40

Specification

specific	amount	unit	standard
Solvent	Styrene	-	-
Appearance	Viscos liquid	-	-
Color	Brown		
Solid content	60 ± 2	Percent	ISO 3251
Acid value	Max 20	mg KOH/g	ISO 2114
Viscosity	300 - 5000	cps	ISO 2555
Density	1.13±0.5%	g/cm3	ISO 1675
Gel time	10 - 20	min	*
Exothermic Peak	140-160	°C	*
Exothermic time	20-30	minute	*

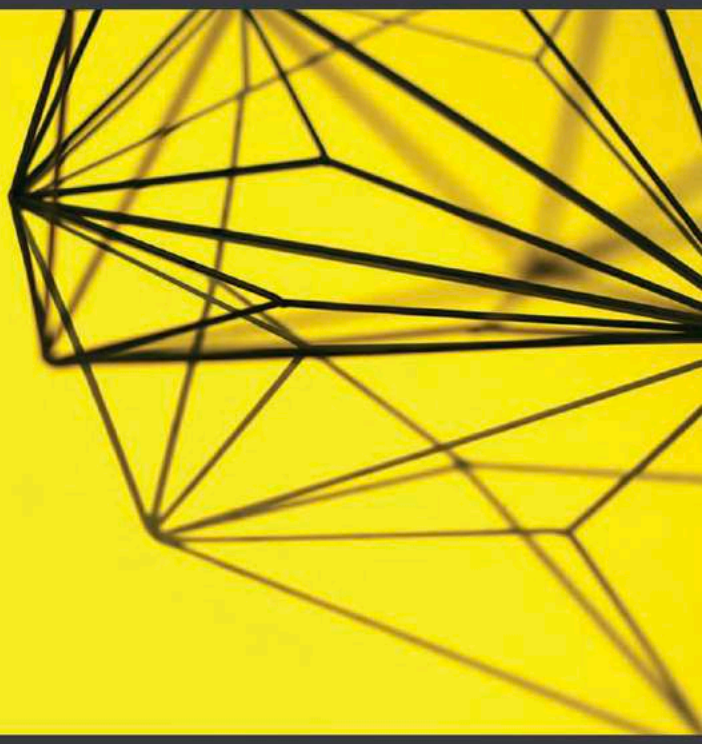
* 100 gr resin VE - 600 with 2 gr cobalt octoate 1% metal and 2 gr MEKP and 0.2 gr dimethylaniline at 25°C.

MASTIC

UV- 2000

UV- 2100

UV- 2200



UV Curable Mastic

UV-2000

Chemical / physical nature

UV – 2000 is a gel based on unsaturated polyesters that cured fast by UV irradiation.

Major applications

The UV-2000 is used in polishing stone surfaces including marble and travertine by filling up the pores.

Storage

UV – 2000 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UV - 2100 will be 4 month ex work.

Properties

- Extremely fast surface and deep curing
- Curing in a wide range of UV wavelengths
- Excellent adhesion to the calcic and silica surfaces

Specification

specific	amount	unit	standard
Solvent	Styrene	-------	-------
Appearance	Gel	-------	-------
Solid content	95 ± 2	Percent	ISO 3251
Acid value	Max 1	mg KOH/g	ISO 2114
Viscosity	5000-10000	cps	ISO 2555
Density	1.15 ± 0.5%	g/cm3	ISO 1675
Flash point	<10	°C	ASTM D93

UV Curable Mastic

UV-2100

Chemical / physical nature

UV – 2100 is a gel based on unsaturated polyesters that cured fast by UV irradiation.

Major applications

The UV-2100 is used in polishing stone surfaces including marble and travertine by filling up the pores.

Storage

UV – 2100 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of UV - 2100 will be 4 month ex work.

Properties

- Extremely fast surface and deep curing
- Curing in a wide range of UV wavelengths
- Excellent adhesion to the calcic and silica surfaces

Specification			
specific	amount	unit	standard
Solvent	Styrene	-------	-------
Appearance	Gel	-------	-------
Solid content	95 ± 2	Percent	ISO 3251
Acid value	Max 1	mg KOH/g	ISO 2114
Viscosity	10000-20000	cps	ISO 2555
Density	1.15 ± 0.5%	g/cm3	ISO 1675
Flash point	<10	°C	ASTM D93

UV Curable Mastic

UV-2200

Chemical / physical nature

UV – 2200 is a gel based on unsaturated polyesters that cured fast by UV irradiation.

Major applications

The UV-2200 is used in polishing stone surfaces including marble and travertine by filling up the pores.

Storage

UV – 2200 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

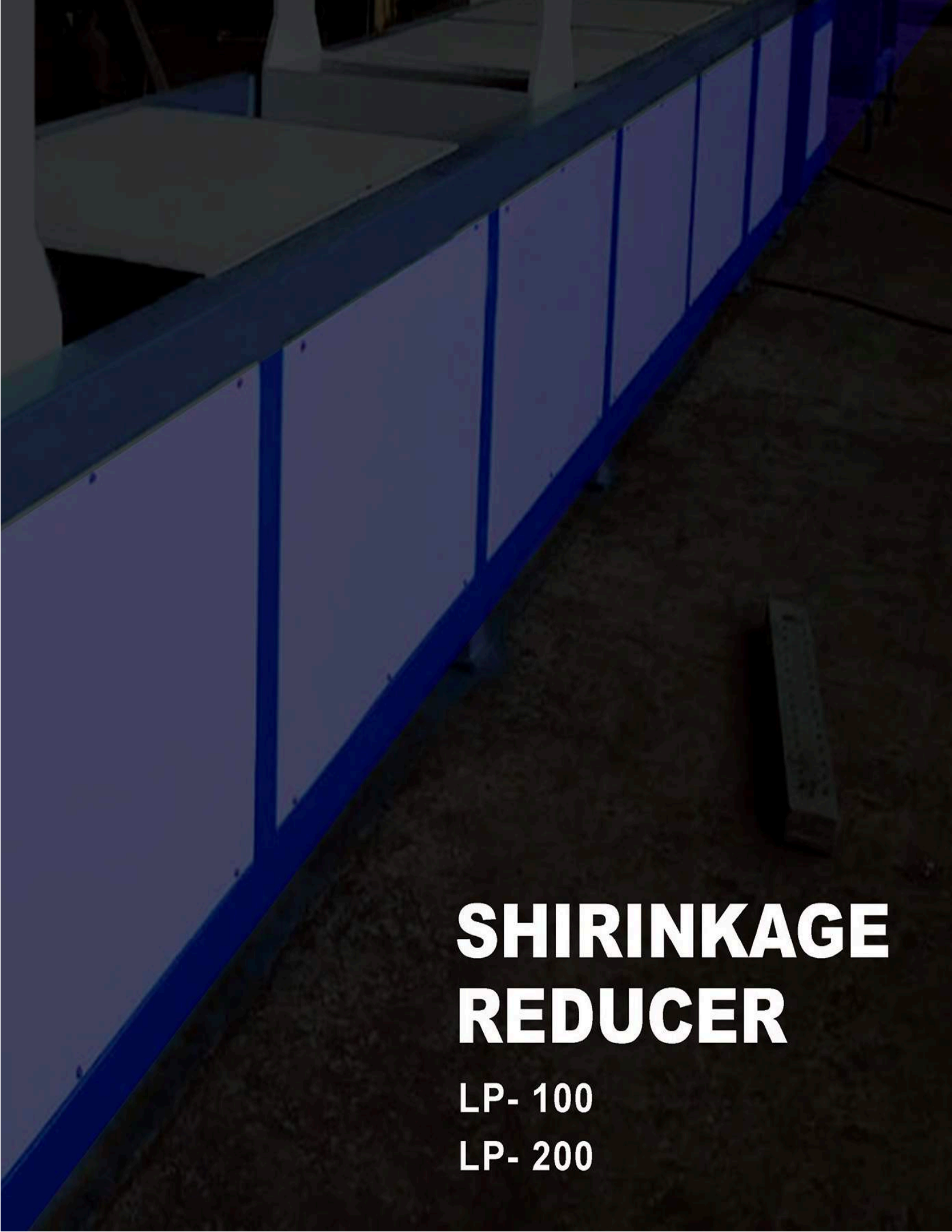
Stability

Under the above mentioned storage condition the stability of UV - 2200 will be 4 month ex work.

Properties

- Extremely fast surface and deep curing
- Curing in a wide range of UV wavelengths
- Excellent adhesion to the calcic and silica surfaces

Specification			
specific	amount	unit	standard
Solvent	Styrene	-------	-------
Appearance	Gel	-------	-------
Solid content	95 ± 2	Percent	ISO 3251
Acid value	Max 1	mg KOH/g	ISO 2114
Viscosity	20000-40000	cps	ISO 2555
Density	1.15 ± 0.5%	g/cm3	ISO 1675
Flash point	<10	°C	ASTM D93



SHIRINKAGE REDUCER

LP- 100

LP- 200

Low Profile Resin
LP-100

Chemical / physical nature

LP – 100 is thermoplastic polymer solution in styrene, designed to be used as a low shrink additive.

Specification			
specific	amount	unit	standard
Solvent	Styrene	-------	-------
Color	Clear	-------	-------
Solid content	30 ± 2	Percent	ISO 3251
Acid value	Max 1	mg KOH/g	ISO 2114
Density	1 ± 0.5%	g/cm3	ISO 1675
Viscosity	2000-4000	cps	ISO 2555

Major applications

The LP - 100 is added to polyester and vinyl ester resins during formulation to improve surface finish and avoid shrinkage. The use of LP-100 varies depending upon the nature of the unsaturated polyester resin from 10% to 30%. This resin especially used as low shrink additive for SMC or BMC formulations

Performance guidelines

Keep LP-100 levels between 10 – 30 % of the total polyester resin weight for SMC or BMC formulations.
In other applications, this resin should be mixed with polyester resin before use and the prepared mixture should be used immediately. If the mixture is not used for a long time, the mixing procedure must be repeated before use.

Storage

LP – 100 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of LP - 100 will be 6 month ex work.

Low Profile Resin

LP-200

Chemical / physical nature

LP – 200 is thermoplastic polymer solution in styrene, designed to be used as a low shrink additive.

Specification			
specific	amount	unit	standard
Solvent	Styrene	-------	-------
Color	Clear	-------	-------
Solid content	30 ± 2	Percent	ISO 3251
Acid value	Max 1	mg KOH/g	ISO 2114
Density	1 ± 0.5%	g/cm3	ISO 1675
Viscosity	2000-4000	cps	ISO 2555

Major applications

The LP - 200 is added to polyester and vinyl ester resins during formulation to improve surface finish and avoid shrinkage. The use of LP-200 varies depending upon the nature of the unsaturated polyester resin from 10% to 30%. This resin especially used as low shrink additive for SMC or BMC formulations.

Performance guidelines

Keep LP-200 levels between 10 – 30 % of the total polyester resin weight for SMC or BMC formulations.
In other applications, this resin should be mixed with polyester resin before use and the prepared mixture should be used immediately. If the mixture is not used for a long time, the mixing procedure must be repeated before use.

Storage

LP – 200 should be storage indoors in original Unopened and undamaged containers in a dry place at storage temperature under 25 °C. Exposure to sunlight should be avoided.

Stability

Under the above mentioned storage condition the stability of LP - 200 will be 6 month ex work.

Contact Details

For inquiries and questions please contact us by the following email and phone:

Phone: +971-569772571
Whatsapp: +971-569772571
Email: Commercial@abwabcorp.com