

Technical Data Sheet

POLY NPPES 025

Description

POLY NPPES 025 is a branched polymeric polyester polyol suitable for low density polyurethane shoe sole system.

Typical properties

Product Data:

Parameter	Unit	Value	Test Methods
Hydroxyl Value	mg KOH/g	65-70	DIN 53 240
Viscosity (at 60°C)	mPa.s	2000-3500	ASTM D 4889
Acid Value	mg KOH/g	<2	ISO 2114
Density	g/cm ³	1.10-1.20	DIN 51 757
Water Content	%	<0.05	DIN 51 777

Supply and storage

The product can be stored for up to 6 months under proper conditions. Short-term temperature fluctuations will not harm the material. Keep the product protected from moisture and water exposure at all times.



Technical Data Sheet

Polyester Poly 752

Description

Polyester Poly 752 is a recycled-PET-based polyester polyol designed for use in rigid polyurethane and polyisocyanurate (PIR/PU) foam systems.

The polyol is synthesized from chemically recycled PET feedstock, offering reduced environmental impact, good mechanical performance, and high dimensional stability in rigid foams.

The product has excellent compatibility with standard polyether polyols, other polyester polyols, and a wide range of halogenated and hydrocarbon blowing agents (cyclopentane, isopentane, n-pentane, HFO-1233zd, HFO-1234ze).

It features a transparent yellow-green appearance, low acidity, and no suspended solids, making it suitable for high-quality PU foam formulations such as:

- PIR and PUR rigid insulation foams
- Sandwich panel systems
- Spray foam formulations
- Block foam
- Continuous and discontinuous board production

Typical properties

Product Data:

Parameter	Unit	Value	Test Methods
Appearance	-	Clear, transparent, yellow-green liquid	Visual
Viscosity (at 25°C)	mPa.s	4800 – 6800	ASTM D 4889
Density	g/cm ³	1.16 – 1.20	ISO 2811 Part 1
Hydroxyl Number	mg KOH/g	280 – 320	ASTM D4274
Acid Number	mg KOH/g	≤ 1.0	ASTM D4662



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Parameter	Unit	Value	Test Methods
Water Content	wt%	≤ 0.05	ASTM E203 (Karl Fischer)
Color (APHA)	APHA	< 200	ASTM D1209
Flash Point (PMCC)	$^{\circ}\text{C}$	$> 180^{\circ}$	ASTM D93
Solubility in Hydrocarbon Blowing Agents	wt% (excellent)	> 20	Internal Method
Compatibility with Polyether Polyols	-	Fully miscible	Internal Method
Compatibility with Polyester Polyols	-	Fully miscible	Internal Method
Residual Solid Content	-	None detected	100-mesh filtration
pH (10% in IPA)	-	5.5 – 7.0	ASTM E70 (modified)

Supply and storage

The product can be stored for up to 6 months under proper conditions. Short-term temperature fluctuations will not harm the material. Keep the product protected from moisture and water exposure at all times.



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Technical Data Sheet

Polyester Poly 792-M55

Description

Polyester Poly 792-M55 is a medium-oil alkyd resin manufactured from glycole, crosslinker, phthalic anhydride, and selected fatty acids. It is used in high-quality industrial metal coatings, general-purpose enamels, automotive refinishing primers, and alkyd-amino baking systems. This resin offers a balanced performance between hardness, flexibility, and drying speed.

Typical properties

Parameter	Unit	Value	Test Methods
Appearance	-	Clear to slightly yellow liquid	Visual
Viscosity (at 25°C)	mPa.s	3000–5500	ISO 2555
Density (at 25°C)	g/cm ³	1.02–1.12	ISO 2811
Acid Value	mg KOH/g	≤4	ISO 2114
Hydroxyl Value	mg KOH/g	35–80	ISO 4629
Oil Length	%	55 (Medium-Oil)	Calculated
Color	Gardner	Max 6–9	ASTM D1544
Non-Volatiles	wt%	52-58	ISO 3251
Air-Dry Time	hr	3–6	ASTM D5895
Full Cure	hr	12–24	ASTM D5895

Supply and storage

The product can be stored for up to 6 months under proper conditions. Short-term temperature fluctuations will not harm the material. Keep the product protected from moisture and water exposure at all times.



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Technical Data Sheet

Unsaturated Polyester Resin UPR-2400

Description

Unsaturated Polyester Resin is widely used in various industries due to its versatility and cost-effectiveness. One of its main applications is in general purpose products, where it serves as a reliable base material with good balance of strength, durability, and processability. This makes it suitable for everyday composite parts, construction materials, and consumer goods.

Typical properties

Product Data:

Parameter	Unit	Value
Solid Content	%	65±1
Acid Value	mg KOH/g	25±5
Viscosity (at 25°C)	cPs	350±25
Density	g/cm ³	1.13±0.20
Gel Time	min	10±1
Peak Temperature	° C	115 ± 10
Gardner Color	Gardner	max 7

Mechanical Properties:

Properties	Test Value	Test Methods
Barcol Hardness	≥30	ASTM D2583
Tensile Strength (MPa)	≥50	ASTM D638-14
HDT (° C)	≥60	ASTM 648-16
Flexural Strength (MPa)	≥70	ASTM D790-15
Water Absorption (%)	≤1	Internal Method



Curing process: 100gr of resins, mixed with 0.5gr Cobalt Octoate 1% & 1.5gr MEKP.

Curing time: 3 hrs in 80°C after that stay in room temperature for 24 hrs.

Supply and storage

UPR-2500 is a highly active resins that should be store in dry place at under 25°C and keep away from direct sunlight. Storage under above conditions, the stability is 6 month.



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Technical Data Sheet

Unsaturated Polyester Resin UPR-2500

Description

Unsaturated Polyester Resin (UPR) is one of the most widely used resins in the industry due to its excellent mechanical and chemical properties. Its main applications include the manufacturing of boats, where it provides high resistance against moisture and marine environments. It is also used in concrete polymer to enhance durability and strength, as well as in pipe & vessels production for improved corrosion and pressure resistance.

Typical properties

Product Data:

Parameter	Unit	Value
Solid Content	%	63±1
Acid Value	mg KOH/g	20±5
Viscosity (at 25°C)	cPs	300±25
Density	g/cm ³	1.13±0.20
Gel Time	min	10±1
Peak Temperature	° C	140 ± 10
Gardner Color	Gardner	max 3

Mechanical Properties:

Properties	Test Value	Test Method
Barcol Hardness	≥50	ASTM D2583
Tensile Strength (MPa)	≥65	ASTM D638-14
HDT (° C)	≥75	ASTM 648-16
Flexural Strength (MPa)	≥100	ASTM D790-15
Water Absorption (%)	≤0.5	Internal Method



Curing process: 100gr of resins, mixed with 0.5gr Cobalt Octoate 1% & 1.5gr MEKP.

Curing time: 3 hrs in 80°C after that stay in room temperature for 24 hrs.

Supply and storage

UPR-2500 is a highly active resins that should be store in dry place at under 25°C and keep away from direct sunlight. Storage under above conditions, the stability is 6 month.



Technical Data Sheet

Unsaturated Polyester Resin UPR-XN

Description

Unsaturated Polyester Resin is one of the most widely used resins in the industry due to its excellent mechanical and chemical properties. Its main applications include the manufacturing of boats, where it provides high resistance against moisture and marine environments. It is also used in concrete polymer to enhance durability and strength, as well as in pipe & vessels production for improved corrosion and pressure resistance.

Typical properties

Product Data:

Parameter	Unit	Value
Solid Content	%	63±1
Acid Value	mg KOH/g	23±5
Viscosity (at 25°C)	cPs	280±25
Density	g/cm ³	1.13±0.20
Gel Time	min	15±1
Peak Temperature	° C	170 ± 10
Gardner Color	Gardner	max 3

Mechanical Properties:

Properties	Test Value	Test Method
Barcol Hardness	≥50	ASTM D2583
Tensile Strength (MPa)	≥70	ASTM D638-14
HDT (° C)	≥80	ASTM 648-16
Flexural Strength (MPa)	≥100	ASTM D790-15
Water Absorption (%)	≤0.5	Internal Method



Curing process: 100gr of resins, mixed with 0.5gr Cobalt Octoate 1% & 1.5gr MEKP.

Curing time: 3 hrs in 80°C after that stay in room temperature for 24 hrs.

Supply and storage

UPR-XN is a highly active resins that should be store in dry place at under 25°C and keep away from direct sunlight. Storage under above conditions, the stability is 6 month.



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