IZEL KIMYA

CREATIVITY IN RESIN

www.izelkimya.com

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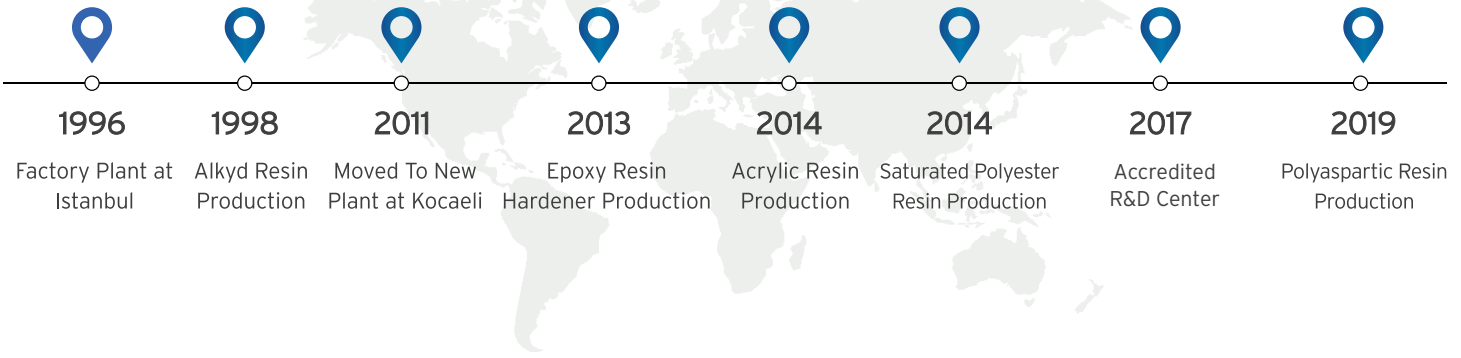
About Us



Izel Kimya was established in 1996 as a supplier of alkyd resins to the Turkish paint and varnish industry. Over the past two decades, through its R&D efforts, Izel Kimya succeeded in extending its product range to cover Acrylic Resins, Polyester Resins, Epoxy Curing Agents and Polyaspartic Resins.

Izel Kimya's manufacturing plant is located in the Gebze Chemical Industrial Zone on a plot of 10.000 m² with a covered area of 8.500 m² with possibilities for further expansion. From this modern facility, Izel Kimya has been supplying leading paint manufacturers in Turkey, Europe and countries across the globe with high performance products suited to customer requirements.

Throughout the years, Izel Kimya has built close relationships with customers both domestically and internationally, based on product reliability and consistency, product performance, technical support, and the ability to design tailor-made individual solutions.

The company culture at Izel Kimya motivates the entire team to strive to become the best in their fields of activity and this has manifested itself in the form of several firsts for Izel Kimya in the Turkish market as well as prestigious awards from various Governmental and Non-Governmental agencies and associations in Turkey.

Izel delivers on its commitment to providing a dynamic, safe and enterprising work environment to its employees, a manufacturing facility committed to continuous improvement in terms of delivering highest environmental and quality standards. Additionally, Izel Kimya has recently begun working on their Sustainability Program to translate their business processes to reflect their commitment to the UN Global Compact.

As a testament to our efforts,we earned the Bronze ranking from Ecovadis in 2022.

GLOBAL PRESENCE

"Our Products Reach Markets Worldwide"

40% Domestic Sales | 60% Export

DISTRIBUTORS DIRECT SALES

Izel Kimya is home to a production capacity that enables it to competently manage the complexities created due to manufacturing a range of different resins in a single plant. This has been largely possible due to a modern laboratory and best-in-class lab equipment - all operated by a well trained and experienced R&D team that provide excellent support to an experienced and well-trained production team..

The state-of-the-art automation system in the plant enables the production team to accurately control every aspect of the production process. All the reactors are designed for temperatures up to 250 °C and can maintain any constant temperature below this. Upon completion of each production cycle, the resulting product undergoes a rigorous filtration process using micron filters. This process ensures that particles outside desired size range are effectively removed, while impurities are filtered out.

While a scrubber system is in place to remove evaporating solvents & toxins in the air, solid waste from our plant is sent to an incineration facility to ensure that it does not contaminate nature and theenvironment.

Izel Kimya is the recipient of multiple awards and commendations from various industry associations and governmental organizations in Turkey for its production safety standards and will continue to strive for excellence in these aspects of its production.

Main Usage Of Our Products

INDUSTRIAL COATING

The products supplied by the industrial coating division at Izel are designed to be used in the manufacture of tough and resilient coatings mainly used in the protection of metal and plastic materials. Izel products enable its customers across the world to design leaner and innovative processes for their products by eliminating questionable chemicals, decreasing energy and natural resources consumed.

ARCHITECTURAL COATING

Izel products are used in decorative and protective coatings. These coatings can be applied to various surfaces such concrete, wood, plastic and metal and therefore find application in wall and floor coatings.

ROAD MARKING & FLOOR COATING

Road marking paints are used on paved roadways, expressways, state routes, city and suburban streets or parking spaces and other designated areas both in residential complexes as well as public spaces. Izel products are preferred for road marking paints and floor coatings for their uniform, quick application and for their durability.

WOOD COATING

Izel innovative resins are excellent with their performance in formulating quality wood coatings, especially in furniture where they represent 5-30% of manufacturing costs. Coating wood results in making it easier to clean, sanitizing the wood by sealing the pores on the surface and thereby prevent from bacterial growth on the surface. In applications of product range are musical instruments, coating the wood also influence properties such as tonal quality while in wood flooring, it can influence the hardness.

CAN & COIL COATING

Synthetic resin production for can and coil coatings provide specific properties such as chemical resistance and ductility as well as additional properties such as weather resistance and color stability.

STOVING ENAMELS

Stoving enamel paints are similar to synthetic enamel except that they cure similar to thermosetting resins on the application of heat in an oven at 120-150 °C for 20-40 minutes. Alkyd butylated amino resins have good flexibility and adhesion, high gloss and excellent chemical resistance.

The Izel Kimya R&D Center

The First Government-Accredited Synthetic Resin R&D Center in Turkey

Since its establishement, Izel Kimya has worked on building up a strong R&D culture. It still operates with the latest state-of-the-art technology throughout its laboratories and utilise new generation formulations and analytical methods.

Izel Kimya R&D Center has the capability and background to develop resins that meet the ever changing and progressive needs of the national and international coatings industries.

R&D Center focuses on developing added-value and innovative products, achieving high success rate in bioequivalence studies, accelerating the development of bioequivalent products and preparing 'Common Technical Document' files used as reference documents in Turkey and other countries.

Furthermore Izel Kimya R&D researchers have many in-house projects and also carry out joint projects with other scientific institutions and universities that result in know-how and technology transfers between university and industry.

Currently, the R&D team has as its main focus on polyaspartic resins, functional acrylic resins and especially the development of bio-based and eco-friendly products with advancedtechnology.

Our Products

RESIN TYPES

Water Reducible Resin

- Water Reducible Alkyd Resins
- Water Reducible Acrylic Resin

Water reducible alkyd resins are end products of oil groups reaction in aclosed polymerization system which is soluble in water. Oil groups in this type of alkyd gives this product high flexibility and applicability. Water reducible acrylic resins can be used in the production of wood coatings, decorative coatings, air or oven drying industrial coatings and varnishes. pH value must be kept between 8,2 to 8,6 to get stabilization in application of these products.

Water reducible acrylic resin is a type of resin that both soluble in water and solvent. The resin can be cross-linked with melamine and urea resins to produce general purpose stoving and industrial finishes.

Water Reducible Resins

PRODUCT NAME	IZELCRYL AQ 12B50	IZELKYD AQ 41BG75
RESIN TYPE	Water Reducible Acrylic Resin	Water Reducible Alkyd Resin
SOLVENT TYPE	n-Butanol	Butyl Cellosolve Acetate / Isobutanol
OIL TYPE	-	Sunflower Fatty Acid
OIL CONTENT %	-	41
SOLID %	48 - 52	74 - 76
VISCOSITY (cP, 25 °C, BROOKFIELD)	1290 - 1760	-
VISCOSITY (25 °C, GARDNER HOLT)	-	Z5 - Z6
ACID (mg KOH/g)	-	40 - 50
DENSITY (20 °C, g/cm^3)	0,98 - 1,05	1,00 - 1,04
*COLOUR (Gardner)	max 2	max 6
pH	7-9	8-9
STOVING ENAMELS	●	
INDUSTRIAL PAINTS &VARNISHES	●	
WOOD COATINGS		●
ROAD MARKING & FLOORINGS		
CAN & COIL COATINGS		
ARCHITECTURAL COATINGS	●	●
GENERAL PURPOSE	•For metal stoving systems at low temperature •Excellent gloss and colour retention •Excellent chemical durability •Chemical and stain resistance •Good adhesion and hardness	•High gloss and yellowing resistance •Specially designed for use in a wide variety of coatings in which performance similar to solvent based alkyds are desired •Very good hardness •Excellent hydrolytic stability •Good weathering and gloss retention

Thermoplastic Acrylic Resins

Thermoplastic Acrylic Resins are unique polymers without any reactive functional groups and therefore do not react with any other matters. Their polymer chains are not cross linked and they react by air-drying. Thermoplastic acrylics typically use a high level of methyl methacrylate monomers in their polymer backbone to provide excellent hardness and durability. Thermoplastic resins can be softened and reshaped when the temperature is increased. These resins are ideal candidates for some industrial processes.

They are mainly used in;

· Road marking paints

· Metal and galvanized surface's coatings

· Architectural coatings

· Aerosol coatings

Thermoplastic Acrylic Resins

PRODUCT NAME	IZELCRYL 20B60	IZELCRYL 24T60	IZELCRYL 24X60	IZELCRYL 25T60
SOLVENT TYPE	Butyl Acetate	Toluene	Xylene	Toluene
MODIFICATION	Specific	Specific	Specific	Specific
SOLID %	58 - 62	59 - 61	59 - 61	58 - 62
VISCOSITY (cP, 25 °C, BROOKFIELD)	2270 - 3620	9850 - 14800	3620 - 6340	6340 - 9850
ACID (mg KOH/g)	max 11	max 18	max 18	max 16
DENSITY (20 °C g/cm^3)	0,99 - 1,03	0,99 - 1,03	0,99 - 1,03	0,99 - 1,03
*COLOUR (Gardner)	max 3	max 3	max 3	max 1
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS				
ROAD MARKING & FLOORINGS		●	●	●
METAL COATINGS		●	●	

GENERAL PURPOSE	•Air dried •CAB compatible •Flexible •High UV resistance •High adhesion	•Air dried •Partial compatibility with CAB •Flexible •High UV resistance •High adhesion	•Air dried •Partial compatibility with CAB •Flexible •High UV resistance •High adhesion	•Air dried •High hardness •High heat resistance •Very fast drying

Thermoplastic Acrylic Resins

PRODUCT NAME	IZELCRYL 28BA58	IZELCRYL 28T58 LV	IZELCRYL 28T60 L	IZELCRYL 28X58
SOLVENT TYPE	Butyl Acetate	Toluene	Toluene	Xylene
MODIFICATION	Specific	Specific	Specific	Specific
SOLID %	57 - 59	57 - 59	59 - 61	57 - 59
VISCOSITY (cP, 25 °C, BROOKFIELD)	6340 - 14800	6340 - 9850	6340 - 9850	14800 - 38300
ACID (mg KOH/g)	max 20	max 20	max 15	max 17
DENSITY (20 °C g/cm^3)	0,99 - 1,03	0,99 - 1,03	1,00 - 1,04	0,99 - 1,03
*COLOUR (Gardner)	max 2	max 2	max 2	max 2
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS				
ROAD MARKING & FLOORINGS	●	●	●	●
METAL COATINGS				
GENERAL PURPOSE	•Air dried •Medium hardness •High heat resistance •Very fast drying	•Air dried •Medium hardness •High heat resistance •Very fast drying	•Air dried •Medium hardness •High heat resistance •Very fast drying	•Air dried •Medium hardness •High heat resistance •Very fast drying

Thermoplastic Acrylic Resins

PRODUCT NAME	IZELCRYL 30B55	IZELCRYL 30TB65	IZELCRYL 30TX55 N	IZELCRYL 45W60
SOLVENT TYPE	Butyl Acetate	Toluene / n-Butanol	Xylene / Toluene	White Spirit
MODIFICATION	Specific	Styrene	Specific	Styrene
SOLID %	54-56	64 - 66	54 - 56	59 - 61
VISCOSITY (cP, 25 °C, BROOKFIELD)	627 - 1290	6340 - 14800	3620 - 6340	7000 - 9000
ACID (mg KOH/g)	max 12	maks. 45	max 3	max 10
DENSITY (20 °C g/cm^3)	0,96 - 1,00	0,96 - 1,00	0,95 - 0,99	0,98 - 1,05
*COLOUR (Gardner)	max 2	maks. 3	max 1	max 1
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS				
ROAD MARKING & FLOORINGS				
METAL COATINGS	●	●	●	
GENERAL PURPOSE	•Air dried •Medium hardness •Good adhesion	• Air dried • High Adhesion • Flexible	•Air dried •Medium hardness •High adhesion •Compatible with metallic pigments	•Air dried •Slow drying •Compatible to apply with a brush

Thermosetting Acrylic Resins

Thermosetting Acrylic Resins are designed with functional monomers to either react with themselves when exposed to heat or moisture or with a cross-linker to form a cross-linked film. As a group, Thermoset Resins have low molecular weight and thus have higher application solids. Once cross-linked, as a class, they provide films with excellent resistance to organic solvents, moisture and UV light. These types of resin do not soften appreciably when exposed to moderately high temperature as thermoplastics do.

They are mainly used in;

· Marine paint
· Industrial finishing
· Automotive paint
· Outdoor applications

The amount of polyisocyanate used to 100g of acrylic resin (100% solid) $= \frac{42 \times 100 \times OH\%}{17 \times NCO\%} \times (NCO/\ OH)$

General suggestion is NCO/OH ratio should be equal to 1.

But;

If the product has to be harder and has more resistance for chemicals; NCO/OH>1

If the product has to be flexible has good adhesion and weatherability; NCO/OH<1

Thermosetting Acrylic Resins

PRODUCT NAME	IZELCRYL 10XB60 1 %OH	IZELCRYL 16X60 N 1,6 %OH	IZELCRYL 18B50 1,8 %OH	IZELCRYL 23X70 2,3 %OH
SOLVENT TYPE	Xylene / Butyl Acetate	Xylene	Butyl Acetate	Xylene
SOLID%	58 - 62	58 - 62	48 - 52	68 - 72
VISCOSITY (cP, 25 °C, BROOKFIELD)	2300 - 3300	3620 - 6340	3000 - 5000	2700-4630
ACID (mg KOH/g)	max 10	max 11	max 6	max 13
DENSITY (20 °C g/cm³)	0,99 - 1,03	0,98 - 1,01	0,98 - 1,02	0,97-1,01
*COLOUR (Gardner)	max 1	max 1	max 1	max 1
HYDROXYL (OH) VALUE %	1,00	1,60	1,80	2,30
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ARCHITECTURAL COATINGS	●	●	●	●
AUTO REPAIR	●	●	●	●
GENERAL PURPOSE	•Fast drying •Low isocyanate requirement	•Fast drying •Low isocyanate requirement	•Fast drying •Low isocyanate requirement •High UV resistance •Compatible with CAB	•Fast drying •Low VOC

Thermosetting Acrylic Resins

PRODUCT NAME	IZELCRYL 26X60 2,6 %OH	IZELCRYL 28XB60 2,8 %OH	IZELCRYL 30B70 3 %OH	IZELCRYL 30X70 N 3 %OH
SOLVENT TYPE	Xylene	Xylene / Butyl Acetate	Butyl Acetate	Xylene
SOLID%	58 - 62	58 - 62	69 - 71	68 - 72
VISCOSITY (cP, 25 °C, BROOKFIELD)	1760 - 3620	2000 - 3000	5000 - 14000	2700 - 4630
ACID (mg KOH/g)	max 13	max 8	max 6	max 8
DENSITY (20 °C g/cm³)	0,97 - 1,01	1,00 - 1,03	0,98 - 1,02	0,99 - 1,03
*COLOUR (Gardner)	max 1	max 1	max 1	max 2
HYDROXYL (OH) VALUE %	2,60	2,80	3,00	3,00
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ARCHITECTURAL COATINGS	●	●	●	●
AUTO REPAIR	●	●	●	●
GENERAL PURPOSE	•Fast drying •High chemical resistance	•Fast drying •High chemical resistance	•Fast drying •High chemical resistance •Low VOC	•Fast drying •High chemical resistance •Low VOC •Partially compatible with CAB

Thermosetting Acrylic Resins

IZELCRYL 30XB60 3 %OH	IZELCRYL 42B70 4,2 %OH	IZELCRYL 45XB60 N 4,5 %OH	IZELCRYL 45XB70 4,5 %OH	IZELCRYL X 45X60 N 4,5 %OH
Xylene / Butyl Acetate	Butyl Acetate	Xylene / Butyl Acetate	Xylene / Butyl Acetate	Xylene
58 - 62	68 - 72	58 - 62	68 - 72	58 - 62
2000 - 3000	2270 - 5400	1760-3620	6340-14800	1760-3620
max 8	max 9	3-8 mg KOH/g	3-8 mg KOH/g	3-8 mg KOH/g
0,99 - 1,03	0,99 - 1,02	0,99-1,05	1,00-1,04	0,98-1,02
max 1	max 1	max 1	max 1	max 1
3,00	4,20	4,50	4,50	4,50
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
•Fast drying •High chemical resistance	•Fast drying •High chemical resistance •Low VOC •Compatible with CAB •High UV resistance	•Fast drying •High chemical resistance	•Fast drying •High chemical resistance •Low VOC	•Fast drying •High chemical resistance

Saturated Polyester Resins

Polyester resins are a part of the polymer family containing ester functional groups in their backbone. They have a common presence of the industry in products such as Polyethylene Terephthalate (PET) and Polycarbonate (PC). Based on their chemical structure, the polyesters can be broadly classified into two main types which are known as saturated and unsaturated polyesters.

PET represents the typical structure of a saturated polyester resin. Saturated polyester resins are prepared by the esterification of polybasic acids and polyols with its characteristic property is excellent flexibility while it maintains high hardness. Saturated polyester resins have both liquid form (solvent based) or solid form. Solvent based liquid saturated polyester resins have applications in coatings used on metal sheets, can and coil coatings as well as automotive paints. They are also used in anti-corrosion coatings on iron and steel structures that have been coated with epoxy-based primers.

Characteristics of saturated polyester resins include;

- Versatility and weather resistance
- Excellent chemical resistance
- Prominent hardness and toughness
- Stain resistance
- Excellent color retention

Saturated Polyester Resins

PRODUCT NAME	IZELPOL 10XM70	IZELPOL 16NB65	IZELPOL 17SB65	IZELPOL 18XNB65
SOLVENT TYPE	Xylene / Methoxy Propanol	Butyl Glycol/ Solvent Naphta	Solvesso 100 / Butyl Glycol	Xylene / Solvent Naphta / Butyl Glycol
APPEARANCE	Colourless to little hazy	Colourless to little hazy	Colourless to little hazy	Colourless to little hazy
SOLID %	68 - 72	63 - 67	63 - 67	63 - 67
VISCOSITY (cP, 25 °C, BROOKFIELD)	1800 - 2500	1500 - 2600 (23 °C)	2000 - 3000	750 - 1500
ACID (mg KOH/g)	max 8	max 10	max 10	max 8
DENSITY (20 °C, g/cm^3)	1,00 - 1,04	1,01 - 1,08	1,05 - 1,09	1,083 - 1,117
*COLOUR (Gardner)	max 3	max 3	max 2	max 3
HYDROXYL (OH) VALUE %	25 - 40	45 - 60	48 - 62	50 – 70
Tg (°C)	17 - 20	3 -7	14 - 17	-
MOLECULAR WEIGHT (g/mol)	8200 - 10000	11000 - 16000	17500 - 22500	4500 - 5500
STOVING ENAMELS	●	●	●	●
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
CAN & COIL COATINGS	●	●	●	●
GENERAL PURPOSE	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance •Compatible with CAB •Partially compatible with Melamine	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance •Compatible with CAB •Partially compatible with Melamine	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance •Compatible with CAB •Partially compatible with Melamine

Saturated Polyester Resins

PRODUCT NAME	IZELPOL 19NB66	IZELPOL 23X65	IZELPOL 60N80
SOLVENT TYPE	Solvent Naphta / Butyl Glycol	Xylene	Solvent Naphta
APPEARANCE	Colourless to little hazy	Colourless to little hazy	Colourless to little hazy
SOLID %	64 - 68	63 - 67	78 - 82
VISCOSITY (cP, 25 °C, BROOKFIELD)	900 - 1500	600 – 1600	2000 - 4000
ACID (mg KOH/g)	max 6	max 23	max 7
DENSITY (20 °C, g/cm^3)	1,085 - 1,115	1,04 - 1,08	1,015 - 1,075
*COLOUR (Gardner)	max 2	max 3	max 3
HYDROXYL (OH) VALUE %	50 – 70	70 - 85	190 – 210
Tg (°C)	-	6 - 10	-
MOLECULAR WEIGHT (g/mol)	4000 - 6500	6500 – 8500	1500 - 3000
STOVING ENAMELS	●	●	●
INDUSTRIAL PAINTS & VARNISHES	●	●	●
CAN & COIL COATINGS	●	●	●
GENERAL PURPOSE	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance •Compatible with CAB •Partially compatible with Melamine	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance •Compatible with Melamine	•Oil-free, hydroxyl-functional saturated polyester resin •High mechanical properties •Good weathering retention •High yellowing resistance

Polyaspartic Resins

Polyaspartic coatings are based on the reaction of polyisocyanate with a polyaspartic ester which is an aliphatic diamine. Polyaspartic polyuria is a novel aliphatic polyuria floor coating system which allows the 2 components to have the desired UV resistance and wide application temperature range.

Polyaspartic resins are more preferable resins because they have high mechanical and chemical properties (adhesion, chemical solvents, acid and bases, hardness and mechanical strength) compared to double component resins such as epoxy and acrylate.

They are mainly used in;

· Exterior coatings
· Swimming pools and furniture
· Roofs and garages
· Wind power plants
· Outdoor and indoor pipe coatings
· Plane hangars
· On the ground of malls, hospitals and airports

Polyaspartic Resins

PRODUCT NAME	IZASP 14	IZASP 15	IZASP 151	IZASP 285
SOLID %	95 - 100	95 - 100	86 - 90	95 - 100
VISCOSITY (cP, 25 °C, BROOKFIELD)	700 - 1800	700 - 2000	100 - 250	60 - 140
AMINE CONTENT (mg KOH/g)	195 - 205	185 - 195	164 - 178	170 - 210
AMINE HYDROGEN EQUIVALENT WEIGHT (AHEW)	approx. 276 g/mol	approx. 290 g/mol	approx. 326 g/mol	approx. 290 g/mol
DENSITY (20 °C, g/cm^3)	1,06 - 1,08	1,05 - 1,07	1,01 - 1,05	1,00 - 1,10
*COLOUR (Gardner)	max 1	max 1	max 1	max 1
*COLOUR (Hazen)	max 250	max 250	max 250	max 250
FLASH POINT (°C)	>97	~ 75	~52	>97
FLOOR COATINGS	●	●	●	●
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ARCHITECTURAL COATINGS	●	●	●	●
GENERAL PURPOSE	•Solvent-free resin for two component top coats and solvent-free coating materials •Excellent UV resistance •Excellent mechanical properties, chemical resistance •Higher fracture strenght than epoxy •Low VOC •Fast drying speed	•Solvent-free resin for two component top coats and solvent-free coating materials •Excellent UV resistance •Excellent mechanical properties, chemical resistance •Higher fracture strenght than epoxy •Low VOC •Medium drying speed	•Diluted supply form of IZASP 15 with Butyl Acetate •Excellent UV resistance •Excellent mechanical properties, chemical resistance •Two-component top coats •Low VOC •Slow drying speed	•Solvent-free resin for two component top coats and solvent-free coating materials •Excellent UV resistance •Excellent mechanical properties, chemical resistance •Flexible •Low VOC

Alkyd Resins

Alkyd resin paints or any other product that contains alkyd resin products have a wide range of application where they can be used as a decorative material or a maintenance or contractor-grade paints. These paints or coatings provide excellent gloss and durability on the surface of material.

In the case of short oil alkyds, these resins are generally oven dried and have a limited solubility only with aromatic and other non-aliphatic solvents. Coating system manufacturing use these resins to air drying primers for wood or metal, floor and machinery enamels, traffic and industrial paints and low bake finishes etc. They are high solid synthetic resins for the production of primers, middle coats, wood stains and top coats etc.

Long Oil Alkyd Resins

PRODUCT NAME	IZELKYD LO 60W70 HV	IZELKYD LO 62W70	IZELKYD LO N 63X70	IZELKYD LO 63W70
SOLVENT TYPE	White Spirit	White Spirit	Xylene	White Spirit
OIL TYPE	Sunflower Fatty Acid	Sunflower Fatty Acid	Sunflower Fatty Acid	Soybean Oil
OIL CONTENT %	60	62	63	63
MODIFICATION	Specific	Specific	Specific	Specific
SOLID %	69 – 71	69 - 71	69 - 71	69 - 71
VISCOSITY (25 °C, GARDNER HOLT)	Z7 - Z8	Z5 - Z6	S - V	Z5-Z6
VISCOSITY (60%, Gardner 25 °C)	Z3-Z4	-	F-H	X-Y
ACID (mg KOH/g)	max 11	max 11	max 11	max 11
DENSITY (20 °C, g/cm^3)	-	0,95 - 0,98	-	0,95 - 0,98
*COLOUR (Gardner)	max 6	max 6	max 7	max 6
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES				
WOOD COATINGS	●	●	●	●
ROAD MARKING & FLOORINGS				
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS	●	●	●	●
GENERAL PURPOSE	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying •High yellowing resistance	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying

Long Oil Alkyd Resins

IZELKYD LO N 63W70	IZELKYD LO 63W70 LV	IZELKYD LO 70D80	IZELKYD LO 72D85	IZELKYD LO 72W80
White Spirit	White Spirit	D60	D60	White Spirit
Sunflower Fatty Acid	Soybean Oil	Soybean Oil	Sunflower Fatty Acid	Sunflower Fatty Acid
63	63	70	72	72
Specific	Specific	Specific	Specific	Specific
69 - 71	69 – 71	79 - 81	84 - 86	79 - 81
Z4 - Z6	W - Y	Z1 - Z3	Z2 - Z4	Z6 - Z7
-	H-J	G-I	E-G	Z5-Z6
max 11	max 11	max 11	max 11	max 8
0,95 - 0,98	0,94 - 0,98	-	0,95 - 0,98	-
max 6	max 6	max 6	max 6	max 7
●	●	●	●	●
●	●	●	●	●
•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying •High yellowing resistance •Odorless	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying •High yellowing resistance •Odorless	•Oxidative drying alkyd resin •High colour durability and gloss retention •Very good hardening. Very good pre-drying and final drying •High yellowing resistance

Medium Oil Alkyd Resins

PRODUCT NAME	IZELKYD MO 43W70	IZELKYD MO 49X60	IZELKYD MO 50T60	IZELKYD MO 50X60
SOLVENT TYPE	White Spirit	Xylene	Toluene	Xylene
OIL TYPE	Sunflower Fatty Acid	Sunflower Fatty Acid	Soybean Oil	Soybean Oil
OIL CONTENT %	43	49	50	50
MODIFICATION	Specific	Specific	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)
SOLID %	69 - 71	59 - 61	59 - 61	59 - 61
VISCOSITY (25 °C, GARDNER HOLT)	X - Z2 (55% Katı)	Z2 - Z4	Z1 - Z2	Z2 - Z3
VISCOSITY (60%, Gardner 25 °C)	-	-	-	-
ACID (mg KOH/g)	max 12	max 11	max 11	max 11
DENSITY (20 °C, g/cm^3)	-	0,98 - 1,02	0,98 - 1,00	0,98 - 1,01
*COLOUR (Gardner)	max 7	max 5	max 6	max 6
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ROAD MARKING & FLOORINGS				
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS	●	●	●	●
GENERAL PURPOSE	•Oxidative drying alkyd resin •High yellowing resistance, and colour durability •Excellent gloss retention	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention	•Oxidative drying alkyd resin •High gloss retention •High quality road marking •Excellent hardness and very good resistance to external factors	•Oxidative drying alkyd resin •High gloss retention •High quality road marking •Excellent hardness and very good resistance to external factors •Excellent hardness

Medium Oil Alkyd Resins

IZELKYD MO 50X65	IZELKYD MO 50X70	IZELKYD MO 51DX55	IZELKYD MO 51X70	IZELKYD MO 51WX55
Xylene	Xylene	D60 / Xylene	Xylene	White Spirit / Xylene
Soybean Oil	Tall Oil Fatty Acid	Sunflower Fatty Acid	Sunflower Fatty Acid	Tall Oil Fatty Acid
50	50	51	51	51
Specific	Specific	Specific	Specific	Specific
64 - 66	69 - 71	54 - 56	69 - 71	54 - 56
Z2 - Z3	Z3 - Z5	Z3 - Z4	Z3 - Z5	Y - Z2
-	W-Y	-	U-W	-
max 11	max 11	max 12	max 11	max 12
1,065 - 1,095	1,07 - 1,10	0,92 - 0,96	1,065 - 1,095	0,93 - 0,96
max 5	max 6	max 6	max 6	max 5
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention	•Oxidative drying alkyd resin •High yellowing resistance, and colour durability •Excellent gloss retention	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention •High performance in auto refinish	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention •High performance in auto refinish •Excellent yellowing resistance

Medium Oil Alkyd Resins

PRODUCT NAME	IZELKYD MO 52W50 HV	IZELKYD MO 52W60	IZELKYD MO 53W55
SOLVENT TYPE	White Spirit	White Spirit	White Spirit
OIL TYPE	Sunflower Fatty Acid	Soybean Oil	Soybean Oil
OIL CONTENT %	52	52	53
MODIFICATION	Specific	Specific	Specific
SOLID %	49 - 51	59 - 61	54 - 56
VISCOSITY (25 °C, GARDNER HOLT)	Z6 - Z7	Z - Z2	Z2 - Z4
VISCOSITY (60%, Gardner 25 °C)	-	-	-
ACID (mg KOH/g)	max 11	2-5	max 11
DENSITY (20 °C, g/cm^3)	0,92 - 0,96	0,91 - 0,94	-
*COLOUR (Gardner)	max 6	max 6	max 6
STOVING ENAMELS			
INDUSTRIAL PAINTS & VARNISHES	●	●	●
WOOD COATINGS	●	●	●
ROAD MARKING & FLOORINGS			
CAN & COIL COATINGS			
ARCHITECTURAL COATINGS	●	●	●
GENERAL PURPOSE	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention •High performance in auto refinish	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention •High performance in auto refinish	•Oxidative drying alkyd resin •High yellowing resistance, colour durability and gloss retention •High performance in auto refinish

Short Oil Alkyd Resins

PRODUCT NAME	IZELKYD SO 30T70	IZELKYD SO L 30X70	IZELKYD SO 35X70	IZELKYD SO 36X55
SOLVENT TYPE	Toluene	Xylene	Xylene	Xylene
OIL TYPE	Coconut Oil Fatty Acid	Lauric Acid	Coconut Oil Fatty Acid	Vegetable Oil
OIL CONTENT %	30	30	35	36
MODIFICATION	Specific	Specific	Specific	Specific
SOLID %	69 - 71	69 - 71	69 - 71	54 - 56
VISCOSITY (25 °C, GARDNER HOLT)	Z3 - Z4	Z4 - Z6	Z4 - Z6	Z2 - Z4
VISCOSITY (60%, Gardner 25 °C)	U-W	X-Z	X-Z	-
ACID (mg KOH/g)	max 10	max 15	max 15	max 11
DENSITY (20 °C, g/cm^3)	0,95 - 0,99	-	1,04 - 1,07	0,92 - 0,96
*COLOUR (Gardner)	max 3	max 2	max 4	max 5
HYDROXYL (OH) VALUE % (on solid)	3,00	3,00	3,85	3,00
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ROAD MARKING & FLOORINGS	●	●	●	●
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS	●	●	●	●
GENERAL PURPOSE	•Excellent yellowing resistance •High colour durability and gloss retention •Top coat glossy, non-yellowing paints and varnishes	•Excellent yellowing resistance •High colour durability and gloss retention •Top coat glossy, non-yellowing paints and varnishes	•Excellent yellowing resistance •High colour durability and gloss retention •Top coat glossy, non-yellowing paints and varnishes	•Good yellowing resistance •High colour durability and gloss retention •Top coat, primer paints and varnishes

Short Oil Alkyd Resins

PRODUCT NAME	IZELKYD SO D 37X60	IZELKYD SO 40T65	IZELKYD SO 40X65	IZELKYD SO 42X60
SOLVENT TYPE	Xylene	Toluene	Xylene	Xylene
OIL TYPE	Dehydrated Castor Oil	Soybean Oil	Soybean Oil	Castor Oil
OIL CONTENT %	37	40	40	42
MODIFICATION	Specific	Specific	Specific	Specific
SOLID %	59 - 61	64 - 66	64 - 66	59 - 61
VISCOSITY (25 °C, GARDNER HOLT)	Z2 - Z4	Z1 - Z3	Z3 - Z4	Z2 - Z4
VISCOSITY (60%, Gardner 25 °C)	-	-	-	-
ACID (mg KOH/g)	max 7	max 11	max 11	max 15
DENSITY (20 °C, g/cm^3)	1,04 - 1,08	1,02 - 1,05	1,02 - 1,05	1,01 - 1,04
*COLOUR (Gardner)	maks. 8	max 6	max 6	max 4
HYDROXYL (OH) VALUE % (on solid)	3,00	4,45	4,45	3,00
STOVING ENAMELS	●			
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ROAD MARKING & FLOORINGS		●	●	●
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS	●	●	●	●
GENERAL PURPOSE	• High colour durability and gloss retention • Good hardness • Scratch resistance • Adhesion and impact resistance • Excellent pigment wetting properties	•Good yellowing resistance •High colour durability and gloss retention •Top coat, primer paints and varnishes	•Good yellowing resistance •High colour durability and gloss retention •Top coat, primer paints and varnishes	•Good yellowing resistance •High colour durability and gloss retention •Top coat, primer paints and varnishes

Rapid (Chain-Stopped) Alkyd Resins

PRODUCT NAME	IZELKYD RAP 23TX65	IZELKYD RAP 25TX70	IZELKYD RAP 26T60 LV	IZELKYD RAP 26T70 LV
SOLVENT TYPE	Toluene/Xylene	Toluene/Xylene	Toluene	Toluene
OIL TYPE	Sunflower Fatty Acid	Soybean Oil	Soybean Oil	Soybean Oil
OIL CONTENT %	25	25	26	26
MODIFICATION	Specific	Specific	Benzoic Acid	Benzoic Acid
SOLID %	64 - 66	69 - 71	59 - 61	69 - 71
VISCOSITY(25 °C, GARDNER HOLT)	Z1-Z3	Z4-Z5	W - Y	Z3 - Z4
VISCOSITY (60%, Gardner 25 °C)	-	W - Y	-	-
ACID (mg KOH/g)	Max 11	max 10	max 11	max 11
DENSITY (20 °C, g/cm³)	0,98 - 1,02	1,04 - 1,08	0,98 - 1,02	0,98 - 1,04
*COLOUR (Gardner)	max 7	max 6	max 7	max 7
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS				
ROAD MARKING & FLOORINGS	●	●	●	●
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS				
GENERAL PURPOSE	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High wetness properties •Fast drying	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High wetness properties	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness

Rapid (Chain-Stopped) Alkyd Resins

PRODUCT NAME	IZELKYD RAP 27X60	IZELKYD RAP O 27X60	IZELKYD RAP HS 28X61	IZELKYD RAP 30X70
SOLVENT TYPE	Xylene	Xylene	Xylene	Xylene
OIL TYPE	Soybean Oil	Soybean Oil	Sunflower Fatty Acid	Soybean Oil
OIL CONTENT %	27	27	28	30
MODIFICATION	Benzoic Acid	Benzoic Acid	Styrene	Benzoic Acid
SOLID %	59 - 61	59 - 61	60 - 62	69 - 71
VISCOSITY(25 °C, GARDNER HOLT)	Z1 - Z2	Z2 - Z3	X - Z1	Z4 - Z6
VISCOSITY (60%, Gardner 25 °C)	-	-	-	U-W
ACID (mg KOH/g)	max 11	max 11	max 7	max 11
DENSITY (20 °C, g/cm³)	1,00 - 1,03	1,00 - 1,03	1,02 - 1,05	0,99 - 1,04
*COLOUR (Gardner)	max 6	max 7	max 5	max 6
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS				
ROAD MARKING & FLOORINGS	●	●	●	●
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS				
GENERAL PURPOSE	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High wetness properties	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance •High performance for hammerton paints •High styrene content	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention

Rapid (Chain-Stopped) Alkyd Resins

IZELKYD RAP 31T65	IZELKYD RAP 31X65	IZELKYD RAP A 32T65	IZELKYD RAP 33T65	IZELKYD RAP F 33X60
Toluene	Xylene	Toluene	Toluene	Xylene
Tall Oil Fatty Acid	Tall Oil Fatty Acid	Sunflower Fatty Acid	Sunflower Fatty Acid	Soybean Oil
31	31	32	33	33
Benzoic Acid	Benzoic Acid	Benzoic Acid	Specific	Phenolic resin
64 - 66	64 - 66	64 - 66	64 - 66	59 - 61
Z1 - Z3	Z4 - Z6	Z4 - Z6	Z2 - Z3	Z2 - Z4
-	-	-	-	-
max 11	max 11	max 15	max 11	max 20
1,07 - 1,10	1,07 - 1,10	1,06 - 1,09	1,05 - 1,09	1,01 - 1,03
max 5	max 5	max 5	max 5	max 8
●	●	●	●	●
●	●	●	●	●
•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness, softening and corrosion resistance

Rapid (Chain-Stopped) Alkyd Resins

PRODUCT NAME	IZELKYD RAP 38T60	IZELKYD RAP 38X60	IZELKYD RAP 38X60 HV	IZELKYD RAP S 45X60
SOLVENT TYPE	Toluene	Xylene	Xylene	Xylene
OIL TYPE	Soybean Oil	Sunflower Fatty Acid	Soybean Oil	Tall Oil Fatty Acid
OIL CONTENT %	38	38	38	45
MODIFICATION	Benzoic Acid	Benzoic Acid	Benzoic Acid	Styrene
SOLID %	59 - 61	59 - 61	59 - 61	59 - 61
VISCOSITY(25 °C, GARDNER HOLT)	Z1 - Z2	Z1 - Z3	Z3 - Z4	W - Y
VISCOSITY (60%, Gardner 25 °C)	-	-	-	-
ACID (mg KOH/g)	max 11	max 11	max 11	max 11
DENSITY (20 °C, g/cm^3)	1,00 - 1,03	1,00 - 1,03	1,02 - 1,03	1,02 - 1,05
*COLOUR (Gardner)	max 6	max 6	max 6	max 5
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS				
ROAD MARKING & FLOORINGS	●	●	●	●
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS				
GENERAL PURPOSE	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance	•Oxidative drying alkyd resin •High yellowing resistance •High colour durability and gloss retention •High hardness and softening resistance •High performance for hammerton paints

Urethane Alkyd Resins

PRODUCT NAME	IZELKYD URAL 33SN50	IZELKYD URAL 56D60	IZELKYD URAL 56SN50	IZELKYD URAL 59D60
SOLVENT TYPE	Solvent Naphta	D40	Solvent Naphta	D60
OIL TYPE	Sunflower Fatty Acid	Soybean Oil	Sunflower Fatty Acid	Sunflower Fatty Acid
OIL CONTENT %	33	56	56	59
MODIFICATION	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)
SOLID %	49-51	59 - 61	49-51	59 - 61
VISCOSITY(25 °C, GARDNER HOLT)	Y-Z1	Z - Z2	Z3-Z4	Z1 - Z3
ACID (mg KOH/g)	max 4	max 4	max 4	max 4
DENSITY (20 °C, g/cm^3)	-	-	-	-
*COLOUR (Gardner)	max 6	max 6	max 6	max 6
STOVING ENAMELS				
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●	●	●
ROAD MARKING & FLOORINGS				
CAN & COIL COATINGS				
ARCHITECTURAL COATINGS				
GENERAL PURPOSE	•TDI modified solvent based oxidative drying alkyd resin •Low odour •Very fast drying	•TDI modified solvent based oxidative drying alkyd resin •Low odour •High performance in parquet, yacht varnish and glass wax	•TDI modified solvent based oxidative drying alkyd resin •Low odour •High performance in parquet, yacht varnish and glass wax	•TDI modified solvent based oxidative drying alkyd resin •Low odour •High performance in parquet, yacht varnish and glass wax

Urethane Alkyd Resins

PRODUCT NAME	IZELKYD URAL 59W60	IZELKYD URAL 63W60	IZELKYD URAL O68W60
SOLVENT TYPE	White Spirit	White Spirit	White Spirit
OIL TYPE	Soybean Oil	Soybean Oil	Soybean Oil
OIL CONTENT %	59	63	68
MODIFICATION	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)
SOLID %	59 - 61	59 - 61	59 - 61
VISCOSITY(25 °C, GARDNER HOLT)	Z1 - Z3	Z - Z2	X-Z1
ACID (mg KOH/g)	max 4	max 4	max 3
DENSITY (20 °C, g/cm^3)	0,91 - 0,94	0,93 - 0,96	0,91-0,95
*COLOUR (Gardner)	max 6	max 6	max 7
STOVING ENAMELS			
INDUSTRIAL PAINTS & VARNISHES	●	●	●
WOOD COATINGS	●	●	●
ROAD MARKING & FLOORINGS			
CAN & COIL COATINGS			
ARCHITECTURAL COATINGS			
GENERAL PURPOSE	•TDI modified solvent based oxidative drying alkyd resin •High performance in parquet, yacht varnish and glass wax	•TDI modified solvent based oxidative drying alkyd resin •High TDI ratio •High performance in parquet, yacht varnish and glass wax •High hardness	•TDI modified solvent based oxidative drying alkyd resin •Urethane oil alkyd resin •High performance in parquet, yacht varnish and glass wax •High hardness and fast drying •High yellowing resistance

Polyurethane Alkyd Resins

PRODUCT NAME	IZELKYD POL F O 28T60	IZELKYD POL F 33T50	IZELKYD POL F 33TX50
SOLVENT TYPE	Toluene	Toluene	Toluene / Xylene
OIL TYPE	Soybean Oil	Tall Oil Fatty Acid	Tall Oil Fatty Acid
OIL CONTENT %	28	33	33
MODIFICATION	Specific	TDI (Toluene diisocyanate)	TDI (Toluene diisocyanate)
SOLID %	59 - 61	49 - 51	49 - 51
VISCOSITY(25 °C, GARDNER HOLT)	Z3 - Z5 (55% solid)	Z1 - Z3	Z2 - Z4
ACID (mg KOH/g)	max 11	max 15	max 15
DENSITY (20 °C, g/cm^3)	1,02 - 1,05	1,02 - 1,05	1,02 - 1,05
*COLOUR (Gardner)	max 7	max 6	max 6
OH VALUE	4,40	4,15	4,15
STOVING ENAMELS	●	●	●
INDUSTRIAL PAINTS & VARNISHES			
WOOD COATINGS	●	●	●
ROAD MARKING & FLOORINGS			
CAN & COIL COATINGS			
ARCHITECTURAL COATINGS			
GENERAL PURPOSE	•Two component short oil alkyd for 2C PU filling varnishes	•Two component short oil alkyd for 2C PU filling varnishes •High hardness	•Two component short oil alkyd for 2C PU filling varnishes •High hardness

Polyurethane Alkyd Resins

PRODUCT NAME	IZELKYD POL F 33X50	IZELKYD POL B 34X70	IZELKYD POL B 35X70
SOLVENT TYPE	Xylene	Xylene	Xylene
OIL TYPE	Tall Oil Fatty Acid	Sunflower Fatty Acid	Coconut Oil Fatty Acid
OIL CONTENT %	33	34	35
MODIFICATION	TDI (Toluene diisocyanate)	Specific	Specific
SOLID %	49 - 51	69 - 71	69 - 71
VISCOSITY(25 °C, GARDNER HOLT)	Z2 - Z4	Z2 - Z4	Z4 - Z6
ACID (mg KOH/g)	max 15	max 15	max 15
DENSITY (20 °C, g/cm^3)	1,02 - 1,05	1,03 - 1,06	1,04 - 1,07
*COLOUR (Gardner)	max 6	max 6	max 4
OH VALUVE	4,15	3,30	3,85
STOVING ENAMELS	●	●	●
INDUSTRIAL PAINTS & VARNISHES			
WOOD COATINGS	●	●	●
ROAD MARKING & FLOORINGS			
CAN & COIL COATINGS		●	●
ARCHITECTURAL COATINGS			
GENERAL PURPOSE	•Two component short oil alkyd for 2C PU filling varnishes	•Two component short oil alkyd for high gloss paints and varnishes •Good resistance to external factors	•Two component short oil alkyd for high gloss paints and varnishes •Good resistance to external factors

Epoxy Resin Hardeners

Epoxy resin hardeners (or curing agents) are reactive compounds that can react with epoxies at room temperature or higher temperatures. There are two main categories in curing agents; polyamides and aliphatic polyamines. In the curing period, firstly primary hydrogens on the amines react with epoxy groups to make secondary amines. Then, secondary amines react with epoxy to cure. Finally, the tertiary amines produced react with epoxy groups to get polymer networks. In order to produce cross-linked polymer networks three active hydrogens and two amine groups must be in the amine hardener chemical structures.

There are many types of amine hardeners. In general, aliphatic, aromatic and cycloaliphatic amines are used with epoxies. Aromatic hardeners react slowly with epoxies at room temperature due to the steric hindrance by aromatic rings. Therefore, the heat is necessary to initiate the curing period. The curing is achieved in higher temperatures. Aromatic structure provides more chemical and heat resistance compared to aliphatic amines.

Aliphatic amines are very useful for curing at room temperature. The hydrogens in aliphatic amines are very active so they release heat while reacting with epoxies. For this reason, the pot life is very short. The bonds between the aliphatic amines and epoxies are very strong that offers more resistance to alkali and inorganic acids but the solvent resistance is not good. Aliphatic amines are hazardous and irritates skin.

Cycloaliphatic polyamines are produced reacting epoxy with high amount of cycloaliphatic amines possessing any double bonds in their chemical structures. Due to this fact, they provide excellent color and color stability. Because their molecular weights are high, they are less volatile, less toxic and have lower amine odour. Also, they are not exothermic as the aliphatic amines. They can be used as curing agents for casting, adhesives, mortars and primers.

$$\text{Content of hardener for 100g of Epoxy Resin} = \frac{\text{AHEW} \times 100}{\text{EEW}}$$

AHEW = Amine hydrogen equivalent weight of hardener

EEW = Equivalent weight of epoxy resin

Epoxy Resin Hardeners

PRODUCT NAME	IZAMID A 15	IZAMID A 15X70 LV	IZAMIN CA 46	IZAMIN CA 35 N
TYPE	Polyamide Hardener	Polyamide Hardener	Cycloaliphatic Polyamine Hardener	Cycloaliphatic Polyamine Hardener
SOLID %	-	69 - 71	-	-
VISCOSITY (cP, 25 °C, BR00KFIELD)	32OO - 4OOO (75 °C)	4OO - 6OO	2OO - 35O	5OO - 9OO
AMINE CONTENT (mg K0H/g)	23O - 27O	16O - 24O	35O - 45O	24O - 35O
AMINE HYDROGEN EQUIVALENT WEIGHT (AHEW)	approx. 198 g/mol	21O - 23O g/mol	approx. 93 g/mol	approx. 104 g/mol
DENSITY (2O °C, g/cmł)	O,95 - O,99	O,94 - O,98	1,OO - 1,O4	1,OO - 1,O4
*COLOUR (Gardner)	max 10	max 12	max 2	max 2
FLASH POINT (°C)	>9O	27	>1OO	-
POT LIFE & TOUCH DRYING (min)	(15-45) & 24O	80-100	2O - 3O	15-21
STOVING ENAMELS			●	●
INDUSTRIAL PAINTS & VARNISHES	●	●	●	●
WOOD COATINGS	●	●		
ROAD MARKING & FLOORINGS	●	●	●	●
CAN & COIL COATINGS	●	●	●	●
ARCHITECTURAL COATINGS	●	●	●	●
GENERAL PURPOSE	•Provides fast curing •Excellent water and corrosion resistance •Excellent adhesion •Excellent pigment and substrate wetting •Good chemical resistance •Long pot life	•Provides fast curing •Excellent water and corrosion resistance •Excellent adhesion •Excellent pigment and substrate wetting •Good chemical resistance •Long pot life	•Provides very fast curing •Excellent water and corrosion resistance •Excellent adhesion •Excellent pigment and substrate wetting •Good chemical resistance •Long pot life	•Provides very fast curing •Very good adhesion for metal and mineral substrate •Good pigment and substrate wetting •Good chemical resistance •Excellent color

Poslex - Unsaturated Polyester Resin Additive

PRODUCT NAME	POSLEX
TYPE	-
APPEARANCE	White Crystals
SOLID %	min 99,6
MELTING POINT (°C)	256 - 259
GENERAL PURPOSE	This product is an additive as a shelf-life extender for unsaturated polyester resin. After the polyester production, while cooling, suggested amount of additive (0,1 - 1 % is added to the polyesterresin at 160-180 °C)

POSLEX prevents the formation of new radicals as well as eliminates free radicals that have already been formed. This is a very different product from hydroquinone which provides the protection of polyester against the oxygen in the air which acts as an initiator for polyesters. By binding the oxygen to form quinone. POSLEX is neutral to oxygen.

POSLEX doesn't affect the curing time during the polyester usage. However, hydroquinone and its derivatives are oxygen absorbents and combine with peroxide giving quinone and they increase the quantity of peroxide needed for polymerization. In another way, hydroquinone prolongs the time of "curing", whereas POSLEX does not.

TESTING METHOD: POSLEX is dissolved in ethylene glycol or methanol for preparing 20% solution of it. 100g of unsaturated polyester resin is taken into a glass bottle with a lid. 0,5-5g of the prepared POSLEX solution is added into the resin and mixed well. Then, the mixture is put into oven at 125 °C. Gelling control is done at half an hour intervals. Every hour corresponds to a month.

Viscosity Comparison Chart (at 25 °C)

Standart Poises	Gardner Hold Tubes	Seconds Gardner Holdt	Seconds 4 Ford Cup
0.5	A		
0.65	B		26
0.85	C		34
1.00	D	1.46	40
1.25	E	1.83	46
1.40	F	2.05	51
1.65	G	2.42	57
1.80		2.64	60
2.00	H	2.93	65
2.25	I	3.30	75
2.50	J	3.67	85
2.75	K	4.03	96
3.00	L	4.40	108
3.20	M	4.70	117
3.40	N	5.00	123
3.70	O	5.40	127
4.00	P	5.80	131
4.35	Q	6.40	144
4.70	R	6.90	147
4.80		7.03	154
5.00	S	7.30	166
5.50	T	8.10	188
6.27	U	9.20	215
8.00		11.60	218
8.84	V	13.00	280
10.70	W	15.70	348
12.90	X	18.90	
14.40		21.10	
17.60	Y	26.80	
22.70	Z	33.30	
23.50		35.00	
27.00	Z1	39.60	
34.00		49.86	
36.20	Z2	53.10	
46.30	Z3	67.90	
62.00		91.00	
63.40	Z4	93.00	
98.50	Z5	144..50	
120.00		176.41	
148.00	Z6	217..10	
200.00		293.00	
383.00	Z7	561..00	
590.00	Z8	864.00	
855.00	Z9		
1066.00	Z10		

IZEL KIMYA®

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