High-Performance Solutions

Improve Your Product Quality with KIMcase Special Products

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KİMTEKS POLYURETHANE

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SPECIAL PRODUCTS

KIMcase High-Performance Solutions

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KIMcase Special Products

The CASE product line consists of coatings, adhesives, sealants and elastomers. The CASE materials are used in different industries including the construction industry, transportation, textiles, architecture. They improve the performance, operation, resistance and appearance of the products and ensure excellent durability for long-term use.

In the CASE applications, polyurethane and polyurea systems are frequently used for the production of materials with superior performance properties and special uses.

Polyurethane (PU) improves the mechanical properties of the materials as well as the surface hardness in **coatings** and **elastomers** and ensures the materials to be long-lasting and durable. In **adhesives**, **binders** and **sealants**, it improves the properties such as flexibility, adhesion and binding, ensuring stronger adhesion and tighter sealing.

Kimpur has a wide portfolio of prepolymer and systems for various CASE applications, under the **KIMcase** Special Products Group. **KIMcase** Special Products, designed for the industries of construction, maintenance and repair, are the result of an innovative technology based on special polymers developed following several applications.

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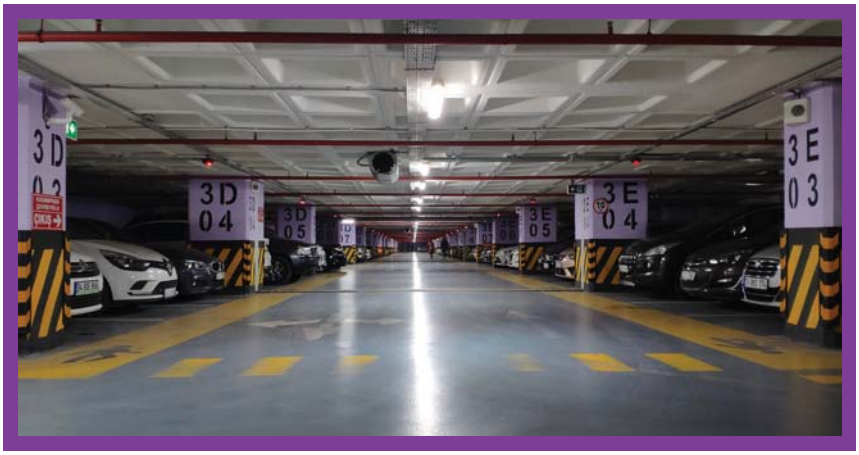
1. Coating Systems (Polyurea Systems)

The coating systems are layers of materials placed on the surface to ensure protection against corrosion and abrasion and to improve surface properties.

KIMcase coating systems that can be applied to surfaces such as metal, concrete or wood consist of pure polyurea and hybrid polyurethane systems.

Areas of Usage:

- Roofs, terraces, balconies, etc. (Waterproof applications)
- Industrial floors and parking lots (Anti-slip surfaces)
- Irrigation channels and aqueducts
- Swimming pools, aquariums, water tanks etc.
- Bridge deck (under asphalt) and other architectural examples
- Load-bearing walls and foundations
- Roofs and landscaped fronts
- Energy, recycling, treatment and water storage facilities
- Fish farms, water treatment plants and petrochemical facilities
- Vehicle, boat priming etc.



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1.1. Pure Polyurea System

The pure polyurea system is an eco-friendly, two-component surface coating and waterproofing material with an elongation rate of 450 ± 50%. It protects surfaces against abrasion, rust and corrosion and does not contain volatile organic components.

ADVANTAGES:

- Ensure 100% waterproofness
- Ensure a monolithic insulation with no joint
- Resistant to harsh weather conditions
- High resistance to various chemical compounds and solvents
- High crack bridging
- High resistance to hydrolysis and aging
- Fast curing (4 sec)
- Quick and easy to apply
- High thermal stability and moisture resistance
- High load-bearing properties
- High adhesion strength on many surfaces

KIMcase PURE POLYUREA SYSTEM		COLOUR OPTIONS	FREE DENSITY (kg/m³)	HARDNESS (ShD)
KIMcoat PP 001	Izokim PP 001	Gray, light gray and natural color	1000	45±5

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1.2. Hybrid Polyurea System

The hybrid polyurea system is an eco-friendly, two-component coating and waterproofing material. It protects surfaces against abrasion, rust and corrosion and does not contain volatile organic components.

The hybrid polyurea systems are designed by establishing a correlation between the desired performance characteristics in line with costs and customer demands.

ADVANTAGES:

- Quick and easy to apply.
- Ensure a monolithic insulation with no joint.
- Good resistance to high temperatures.
- High resistance to hydrolysis and aging.
- High adhesion strength on surfaces.
- Suitable cure time depending on the ambient conditions.
- Cost-effective

KIMcase HYBRID POLYUREA SYSTEM		COLOUR OPTIONS	HARDNESS (ShA)
KIMcoat HP 001	Izokim HP 001	Gray, light gray and natural color	75±10

2. Binding and Sealing Systems

The binding systems can keep surfaces and materials together functionally. Unlike a coating, they contain a binder, keeping multiple sublayers together.

The sealing systems prevent liquids from penetrating through the surfaces, joints, or openings. They are also used in the building and construction industry to prevent dust, heat, and sound flow.

Kimpur has developed **KIMcase** binding systems with excellent adhesion, eco-friendly and recyclable properties, to be used as a binder in different industries, and **KIMcase** sealing systems to prevent passage of liquid on surfaces.

2.1. Binding Systems

Kimpur has developed a variety of single-component binding systems depending on their area of usage.

Areas of Usage:

- Walking paths
- Sports field floors
- Playgrounds
- Park and garden covering
- Window and door sills
- Rubber derivative products such as rubber roll carpet, rubber pavement curbs

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ADVANTAGES:

- 100% solid (Solvent-free)
- VOC-Free
- Ensures proper viscosity and reaction speed for molding operations.
- Superior performance in binding rebounded foams and SBR/EPDM rubber granules.
- Aliphatic and aromatic varieties for the intended performance.
- Utilizing in hot and cold cure processes.

SBR (Styrene Butadiene) Rubber: It is a synthetic rubber derived from styrene and butadiene. It is suitable for use within the temperature range between -50 °C and +100 °C.

EPDM (Ethylene Propylene Diene Monomer) Rubber: It is a synthetic rubber, consisting of ethylene, propylene and diene monomers. It is suitable for use within the temperature range between -40 °C and +150 °C.

NBR (Nitril) Rubber: It is a synthetic rubber derived from acrylonitrile and butadiene. It is suitable for use within the temperature range between -30 °C and +150 °C.

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BINDERS	AREAS OF USAGE AND SYSTEM FEATURES	NCO %	VISCOSITY (25 °C)	USAGE RATE (%)	DEMOLDING TIME (mins.)	MOLD TEMPERATURE (°C)
Izokim CP 002	**BINDERS FOR MOLDED PARTS** ◆ Rubber products are used on safety surfaces with SBR and EPDM. ◆ They ensure a good performance in terms of strength and durability.	10,5±0,5	3800±500	5±1	10±2	150±20
Izokim CP 023	**BINDERS FOR MOLDED PARTS** ◆ Used on rubber mats, molded rubber products and safety surfaces with SBR and EPDM. ◆ They ensure a good performance in terms of strength and durability.	12±0,5	1300±200	15±5	540±60	Room Temperature
Izokim CP 025	**BINDERS FOR MOLDED PARTS** ◆ Used for binding SBR and NBR rubber granules and recycling the scrap foams. ◆ They ensure a good performance in terms of strength and durability.	10,5±0,5	2000±200	10±2	10±2	150±20
Izokim CP 027	**BINDERS FOR MOLDED PARTS** ◆ Used for recycling the scrap foams. ◆ They ensure a good performance in terms of strength and durability.	10,5±0,5	1600±300	10±2	10±2	160±20
Izokim CP 028	**BINDERS FOR MOLDED PARTS** ◆ Used for recycling the scrap foams. ◆ Good performance in terms of strength and durability.	15,5±0,5	750±50	10±2	10±2	160±20
Izokim CP 028-C	**BINDERS FOR MOLDED PARTS** ◆ Used for recycling the scrap foams. ◆ They ensure a good performance in terms of strength and durability.	14,5±0,5	650±100	10±2	10±2	160±20

BINDERS	AREAS OF USAGE AND SYSTEM FEATURES	NCO %	VISCOSITY (25 °C)	USAGE RATE (%)	DEMOLDING TIME (mins.)	MOLD TEMPERATURE (°C)
Izokim CP 029	**BINDERS FOR MOLDED PARTS** ◆ Used on rubber mats and safety surfaces with SBR and EPDM. ◆ High UV resistance.	10,5±0,5	400±100	15±1	10±2	160±20
Izokim CP 030	**BINDERS FOR MOLDED PARTS** ◆ Used on rubber mats and safety surfaces with SBR and EPDM. ◆ High UV resistance.	11,5±0,5	1250±200	15±1	10±2	160±20

2.2. Sealing Systems

The **KIMcase** sealing systems, developed by **Kimpur**, are used in the automotive industry, for the production of outer covers that allow the electrical cables to be fixed in the line and prevent passage of liquid.

KIMcase SEALING SYSTEMS		SYSTEM FEATURES	FREE DENSITY (kg/m³)	MOLDED DENSITY (kg/m³)	HARDNESS (ShA)
KIMcase SL 001	Izokim SL 001	Water-based, natural, electrical conductivity and low water permeability	640±40	750±50	75±5
KIMcase SL 002	Izokim SL 001	Water-based, Black-colored gasket system	300±10	-	35±5

3. Elastomer Systems

Elastomers are rubbery materials that are composed of long-chain molecules or polymers and can return to their original shape after stretching.

KIMcase elastomer systems are used in different fields including two-component molding elastomers, reaction injection molding and PU gel types.

3.1. Two-Component Molding Elastomers

Two-component polyurethane systems that are injected with both low-pressure and high-pressure machines in closed molds.

Areas of Usage:

- Filled mats
- Industrial roller coatings
- Hydraulic seals
- Elevator chock
- Industrial filters
- Floating cells
- Textile roller

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ADVANTAGES:

- Can be applied with filling.
- Ensures a smooth skin appearance.
- Acts like plastics and elastics.
- Can be designed with different density, hardness and demolding times.
- Vibration and shock absorption.
- Thanks to its thermoset structure, it shows high resistance to changing ambient conditions.
- Dimensional stability thanks to its macromolecular structure.

KIMcase TWO-COMPONENT MOULDING ELASTOMERS		AREAS OF USAGE	FREE DENSITY (kg/m³)	MOLDED DENSITY (kg/m³)	HARDNESS (ShA)
KIMcase CE 001	Izokim CE 002	Filled Mat System	975±75	1200±100	70±5
KIMcase CE 001-B	Izokim CE 002	Filled Mat System	975±75	1200±100	70±5
KIMcase CE 003	Izokim CE 005	Elevator Chock	285±5	530	80±5
Izokim CE 004	1.4 Butanediol	Industrial Roller Coatings	-	-	84±2

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3.2. RIM (Reaction Injection Molding) System

It is a two-component polyurethane RIM system for automotive and composite industries, injected with low pressure in closed molds.

Areas of Usage:

- Automotive outer panel/bumper parts
- Industrial device cases
- Reinforced composite production

ADVANTAGES:

- Allows obtaining high-density and hard products.
- High shock resistance.

KIMcase RIM SYSTEM		FREE DENSITY (kg/m³)	MOLDED DENSITY (kg/m³)	HARDNESS (ShD)
KIMcase RM 001	Izokim RM 001	455±20	1000±100	50±5

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3.3. Polyurethane Gel

Kimpur has developed a polyurethane gel system with various hardness and elongation rates.

Areas of Usage:

- Viscoelastic (memory foam) pillow surfaces
- Shock absorbing pads
- Bicycle saddles
- Wrist pads for keyboards and mouse pads

ADVANTAGES:

- Acts like plastics and elastics.
- High comfort thanks to its adjustable hardness.
- High durability.

KIMcase POLYURETHANE GEL SYSTEM		COLOUR OPTIONS	FREE DENSITY (kg/m³)	MOLDED DENSITY (kg/m³)	HARDNESS (ShA)
KIMcase GL 001	Izokim GL 001	Natural and blue color	1000 ± 75	1000 ± 100	25 ± 2

For the selection of the most suitable systems for your products and processes,more detailed information about the products and TDS and MSDS documents, please contact our sales office.

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