KiMRIGID®
Rigid Foam Systems

SAFE AND SUSTAINABLE STRUCTES

KiMPUR

Sandwich Panel Systems

KIMrigid® SANDWICH PANEL SYSTEMS

With ever increasing energy consumption in the world, current energy sources should be used in the most effective and productive ways to meet such demand. Energy efficiency has become an indispensable part of sustainable development since it directly affects our future and the environment. Energy savings also means long term cost saving for the consumer.

In studies on energy efficiency, the share of buildings in energy consumption have been determined as very significant and sandwich panels that provide high thermal insulation have started widespread use creating critical impact on energy efficiency.

Sandwich panels used in the construction sector provide buildings with thermal insulation as well as protection against external factors and supply a solid, firm barrier. They are composed of composite, high resistance, low density foam filling material. While the inner and outer metal sheets provide protection from external factors and prevent corrosion, the foam filling material ensures thermal insulation.

The core material used in the sandwich panel has significant importance regarding energy saving with thermal insulation. Polyurethane foam provides high insulation performance for the buildings with its low conductivity coefficient. Furthermore, it provides the opportunity to achieve more living space in the buildings through allowing the manufacture of thinner panels. Due to these superior features, polyurethane has become the ideal and indispensable filling material used in sandwich panel manufacture.

Kimpur developed **KIMrigid®** Sandwich Panel Systems for the production of polyurethane foam that ensures safe and sustainable structures with very high fire resistance and excellent thermal insulation properties.

Our systems are divided into two groups as **continue (PIR and PUR)** and **discontinue sandwich panel systems.** Continue systems can be composed of 2, 4 or 5-components depending on the production line; while discontinue systems offer solutions with different reaction times depending on the machine flow rate and demolding time. The systems are formulated in different fire resistance levels according to requirements.

KiMRIGID®
Rigid Foam Systems

AREAS OF USAGE

- Pitched Roofs
- Flat Roofs
- Facades
- Insulation Boards
- Cold Storage Room Panels
- Refrigerated Containers

ADVANTAGES

- High fire resistance and dimensional stability
- Superior mechanical and thermal features
- Excellent insulation with low thermal conductivity coefficient
- High productivity with excellent curing feature
- Minimum scrap with excellent processability
- Good adhesion on appropriate process conditions
- Extending the life of the building with its light feature
- Use of 100% pure raw materials
- Systems designed for different flammability classes (PIR, B2, B3)

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KIMrigid® Continue Sandwich Panel Systems

Material Code	Sytem Features	Molded Density (kg / m³)	Reaction to Fire Class (DIN 4102)	Certificate
KIMrigid PIR 204	- It is a 4-component PIR continue system. - High Index PIR System (> 300 index) - It has a specially developed trimerization catalyst for high PIR molecule formation. - Primer application is mandatory to achieve the desired adhesion.	42	B2,E	REACH
KIMrigid PIR 205	- It is a 5-component PIR continue system. - High Index PIR System (> 300 index) - It has a specially developed trimerization catalyst for high PIR molecule formation. - Primer application is mandatory to achieve the desired adhesion.	42	B2, E	TSEN 13501-1+A1:2013 (BS1,d0) Fire Reaction Classification Report FM Approval REACH
KIMrigid RC 060	- It is a 5-component PIR continue system. - Specially developed for high mechanical properties. - Provides fast production with its excellent curing feature.	40	B2, E	REACH B,s3,d0
KIMrigid RC 101	- It is a 2-component PIR continue system. - High mechanical and adhesion properties.	36	B2, E	REACH
KIMrigid RC 110	- It is a 2-component PIR continue system. - High mechanical and adhesion properties. - Good curing properties.	41	B3	-
KIMrigid RC 094	- It is a 4-component PIR continue system. - High pentane resolution. - High mechanical and adhesion properties.	40	B3	-
KIMrigid RC 095	- It is a 5-component PIR continue system. - High pentane resolution. - High mechanical and adhesion properties.	40	B3	-
KIMrigid PIR 210	- It is a 5-component bio-based, continuous system for sandwich panel production. - It is environmentally friendly with its **10%** bio content. - It does not compromise its technical and mechanical properties compared to standard systems.	42	-	-
KIMrigid PIR 211H	- It is a 5-component continuous system for sandwich panel production, compatible with the new generation blowing agents. - **20%** more thermal insulation performance. - Allows the production of **20%** thinner panels. - Reduces carbon emissions by **7%** in the production of a 100 m² PIR sandwich panel with 100 mm thickness.	44	-	-

BIO BASED

New Generation Blowing Agents

KIMrigid® Discontinue Sandwich Panel Systems

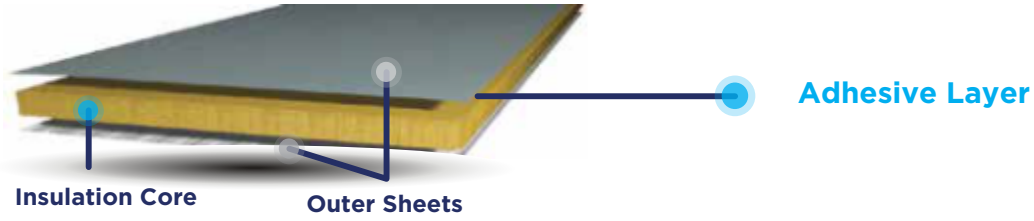
Material Code	Blowing Agent	Applied Density (kg/m^3)	Reaction to Fire	Certificate
KIMrigid RD 068	HFC	42	B3	-
KIMrigid RD 073	FA - HFC	42	-	-
KIMrigid RD 075	n-pentane	42	B3	-
KIMrigid RD 077	n-pentane	42	B2	TS EN 13501-1:2018 (CS3,d0) Fire Reaction Classification Report
KIMrigid RD 090	FA - HFC	44	B1	TS EN 13501-1:2018 (CS3,d0) Fire Reaction Classification Report
KIMrigid RD 078	n-pentane	44	B1	TS EN 13501-1:2018 (CS3,d0) Fire Reaction Classification Report
KIMrigid RD 100	n-pentane	42	B3	-

BIO BASED

KIMrigid® MW/EPS SANDWICH PANEL ADHESIVE SYSTEMS

The inner bonding and outer metal sheets of the sandwich panel with the inner filling is very important for the performance of the panel. It is important for both the inner layer and outer layer to be strong. For this reason, a material with strong adhesion features should be preferred when selecting the right production for sandwich panels.

In order to extend the life of the structure and to obtain more living space, it is expected that the adhesive part in panel production should be thin, light in structure and it must obtain abrasion resistance for long-lasting use.



In addition to being used as a filling material in sandwich panel production with its high advantages, polyurethane is frequently preferred as an adhesive material with its very good adhesion to the surface, high abrasion resistance and lightness properties.

For the production of sandwich panels, **Kimpur** has developed the durable KIMrigid® MW/EPS Sandwich Panel Adhesive Systems, specially designed for the demands of our customers, with excellent adhesion properties to surfaces.

ADVANTAGES

- Excellent adhesion to metal sheet surfaces
- Compatible with EPS and rock wool
- Production at high line speed with fast adhesion
- High abrasion resistance
- Pure raw materials

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KIMrigid® Sandwich Panel Adhesive Systems

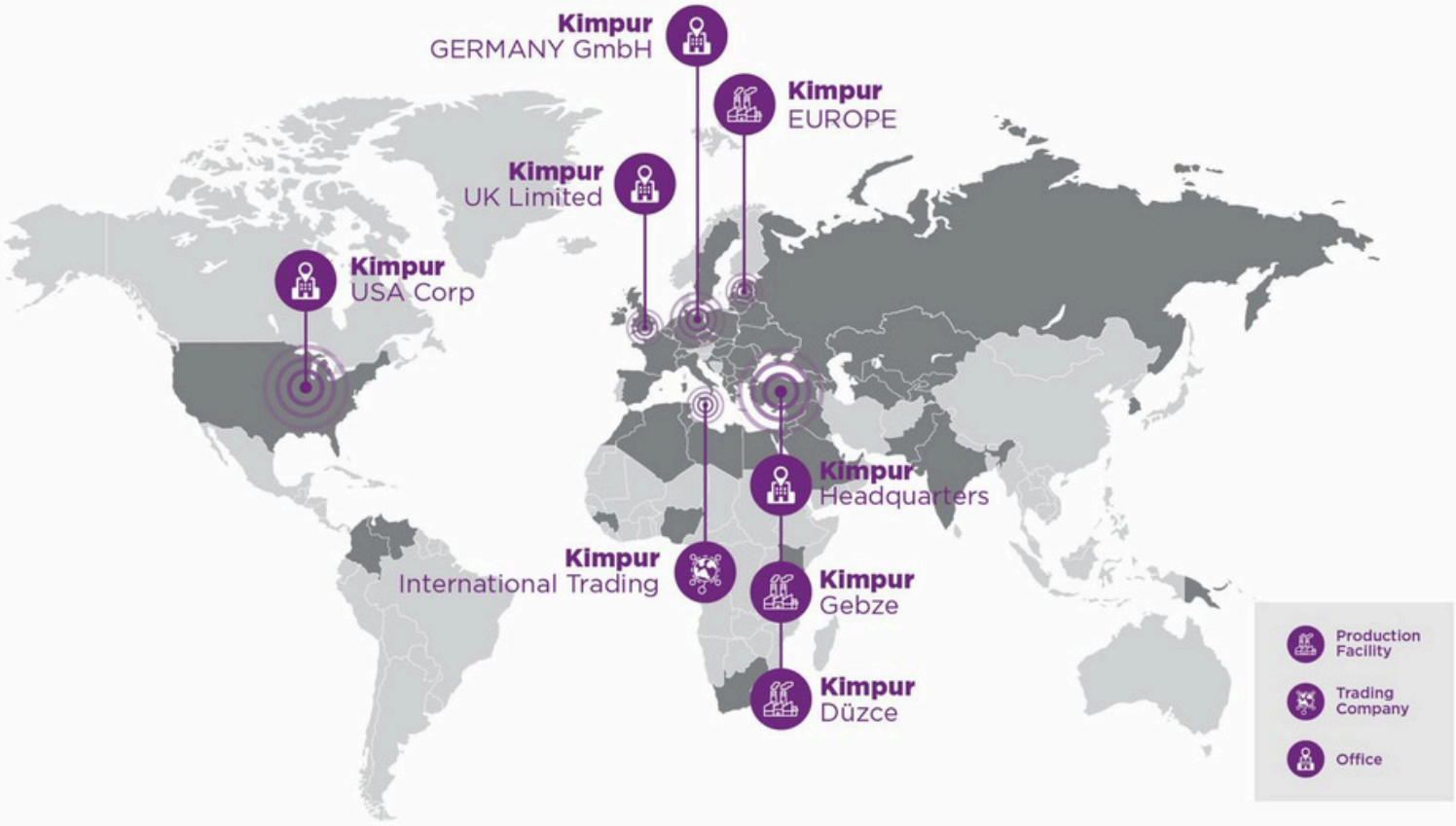
Material Code	Application Method	Free Rise Density (kg / m^3)	Advantages
KIMrigid RCG 004	Spray or Disc	115	Two-component polyurethane glue system. Designed to produce metal faced panel with mineral wool or EPS as a core material.
KIMrigid RCG 009	Whipping	50	Two-component polyurethane glue system. Designed to produce metal faced panel with mineral wool or EPS as a core material.
KIMrigid RCG 010	Whipping	42	Two-component polyurethane glue system. Designed to produce metal faced panel with mineral wool or EPS as a core material.
KIMrigid RCG 012	Oscillating Poker	43	Two-component polyurethane glue system. Designed to produce metal faced panel with mineral wool or EPS as a core material.

You can contact our sales office for further detailed information about the products, TDS and MSDS documents.

TÜRKİYE'S LARGEST POLYURETHANE SYSTEM HOUSE

Kimpur is the polyurethane system house with the largest capacity in the region, with a production capacity exceeding 200,000 tons. It leads the sector by exporting to more than 60 countries in 5 continents. Polyurethane systems produced; It is used in different sectors such as shoes, automotive, furniture, heating and cooling, insulation-construction and defense industry.

GLOBAL ACTIVITIES



TÜRKİYE'S TOP 500 ISO INDUSTRIAL ENTERPRISES

TOP 1000 EXPORTERS OF TÜRKİYE (TİM: TURKISH EXPORTERS ASSEMBLY)

TÜRKİYE'S LARGEST 500 FORTUNE COMPANIES

İKMİB İstanbul Chemicals And Chemical Products Exporters' Association Stars of Exports

Turkishtime R&D 250 TURKISH COMPANIES WITH THE HIGHEST R&D EXPENSES

REACH COMPLIANCE

United Nations Global Compact

Responsible Care® OUR COMMITMENT TO SUSTAINABILITY

Kimpur Corporate Promotional Film
Click to watch

KİMPUR

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LEGAL INFORMATION

At Kimpur, we strive to provide you with the highest quality polyurethane systems, backed by our expertise and dedication to innovation. The information provided in this brochure is a reflection of our expertise and knowledge. However, we highly recommend for users to conduct their own thorough assessments and tests to ensure the suitability and optimal performance of our products for their intended applications. While we strive to provide accurate and reliable information, Kimpur does not assume any liability or offer any warranty, whether expressed or implied, regarding the properties, performance, or fitness for a particular purpose of our products. Descriptions, specifications, and other details provided herein are subject to change without prior notice and should not be considered as binding contractual guarantees. As the recipient of our products, our customers assume full responsibility for compliance with all applicable laws, regulations, and intellectual property rights. We highly recommend obtaining comprehensive information on product toxicity, adhering to proper handling procedures, and ensuring compliance with safety and environmental standards. At Kimpur, we value our partnership with you and strive to provide exceptional support. However, it is important to emphasize that the application, use, and processing of our products are ultimately the sole responsibility of the user. Please note that the safety data provided in this brochure is for informational purposes only and does not constitute a legally binding Material Safety Data Sheet (MSDS). To obtain the relevant MSDS, kindly request it from your supplier or contact us directly at uncommonsolutions@kimpur.com. Our team is ready to assist you with any inquiries or specific safety information you may need.

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