# SAFE AND SUSTAINABLE STRUCTURES





Sandwich Panel Systems

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# **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 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.

# **AREAS OF USAGE**

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

Refrigerated Containers

Insulation Core Outer Sheets

# **ADVANTAGES**

- High fire resistance and dimensional stability
- Superior mechanical and thermal features
- Excellent insulation with low thermal conductivity coefficient ( $\lambda$ :21mW/mK)
- 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)



MATERIAL CODE	DEFINITION	<b>APPLIED</b> <b>DENSITY</b> (kg / m³)	DOUBLE BAND TEMPERATURE (°C)	REACTION TO FIRE CLASS (DIN 4102)	PRIMER APPLICATION
KIMrigid PIR 205	<ul> <li>It is a 5-component PIR continue system.</li> <li>High Index PIR System (&gt; 300 index)</li> <li>It has a specially developed trimerization catalyst for high PIR molecule formation.</li> <li>Primer application is mandatory to achieve the desired adhesion.</li> </ul>	42	60-65	B2	Mandatory
KIMrigid RC 060	<ul> <li>It provides homogeneous foam distribution and minimum voids by high pentane solubility.</li> <li>Formulated by Easy-PIR Technology</li> </ul>	40	50-55	B2	Not mandatory
KIMrigid RC 060B	<ul> <li>It is a 5-component continue system for sandwich panel manufacture.</li> <li>It has been specially developed for high mechanical properties.</li> <li>It offers fast production thanks to its excellent curing feature.</li> </ul>	40	40-45	B3	Not mandatory

## **KIMrigid** Continue Sandwich Panel Systems



## **KIMrigid** Discontinue Sandwich Panel Systems

KIMrigid + Izokim RD 001	<b>MIXING RATIO</b> (Polymix / Iso)	<b>APPLIED DENSITY</b> (kg / m <sup>3</sup> )	MOULD TEMPERATURE (°C)	REACTION TO FIRE (DIN 4102)
KIMrigid RD 068	140	42	40-45	B3
KIMrigid RD 075	120	42	35-40	В3
KIMrigid RD 077	140	42	35-40	B2
KIMrigid RD 078	160	44	35-40	B1

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

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**PRODUCTION CAPACITY** 110.000 TON



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**Kimpur Means Quality** 

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**Kimpur Means Strong Communication Networks with Its All Stakeholders** 

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**Kimpur Means Mutual Trust and Cooperation** 

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**Kimpur Means Strong Communication Networks with Its All Stakeholders** 



**Kimpur is an Innovator and Solution Provider** 



**Kimpur Means Experience** 



**Kimpur is Sensible to The Environment** 



Kimpur is a Leading and **Technology-Oriented Company** 







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