



## KIMCOOL RD 054

### DESCRIPTION

- Fully blended (except blowing agent) rigid foam system for the insulation of refrigerators and freezer.
- Designed for the fast cycle time where demoulding times 3 to 6 minutes is possible
- It is developed as cyclo-pentane blown system in which cp70 or cp95 can be used.
- It has very strong mechanical properties leading excellent dimensional stability and high compressive streng

### COMPONENTS

ITEM	NAME OF COMPONENT	DESCRIPTION
A	KIMCOOL RD 054	POLYOL MIXTURE
B	IZOKIM RD 001	ISOCYANATE
C	CYCLO-PENTANE	BLOWING AGENT

### PHYSICAL AND CHEMICAL PROPERTIES OF COMPONENTS

	UNIT	STANDART	A	B
Density	gr/cm <sup>3</sup> (20°C)	ASTM D 891	1,09	1,23
Viscosity	mPa.s (25°C)	ASTM D 4878	3500	250
OH Number	mgKOH/g	ASTM D 4274	385	-

\* Specific gravity is 1,02 g/cm<sup>3</sup> when 13% cyclopentane blended.

### REACTION CHARACTERISTICS

MIXING RATIO OF THE COMPONENTS	%
A KIMCOOL RD 054	100
B IZOKIM RD 001	147
C CYCLOPENTANE	13

\*Mixing ratio of pentane blended polyol 1,30 Iso / (polyol + CP)

UNIT	VALUE	STANDART
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Stirring Time	sec	5	KIMTEKS INTERNAL METHOD
Cream Time	sec	10	KIMTEKS INTERNAL METHOD
Gel Time	sec	64	KIMTEKS INTERNAL METHOD
Rise Time	sec	100	KIMTEKS INTERNAL METHOD
Tack Free Time	sec	110	KIMTEKS INTERNAL METHOD
Free Rise Density	kg/m <sup>3</sup>	28	KIMTEKS INTERNAL METHOD

Data refer to laboratory tests made with components at 20°C, hand-mixed with mechanical stirrer at 3000 rpm.

Reported values vary depending on processing condition

## STORAGE AND SAFE USE

Polyurethane components are moisture sensitive. Therefore they must be stored at all times in sealed, closed containers at recommended temperatures

More detailed information about storage, handling and safe use should be obtained from the material safety data sheet.

	UNIT UNIT	A	B
Storage Temperature	°C	15-25	15-25
Shelf Life	months	6	6

## PROCESSING

- Mixing ratio of the components should be kept same as written on form to achieve optimum foam properties
- Temperatures of the raw material should be between 20 - 22°C and constant during the daily production
- Variation in temperature of the raw materials will lead change in reactivity.
- Enviroment and surface temperature of moulds will effect on flowability and homogenous distribution of the foam.



- It is recommended to achieve mould and jig temperature about 40°C - 45°C to achieve good adhesion and flowability
- This system is suitable for both high and low pressure machine. With HP machine it is suggested to adjust pressure on both components about 140-150 bar.
- It is recommended to check suitability of the system before routine production.

## FOA PROPERTIES BY HP MACHIN

	<i>UNIT</i>	<i>VALUE</i>	<i>STANDART</i>
Cream Time	sec	6	KIMTEKS INTERNAL METHOD
Gel Time	sec	48	KIMTEKS INTERNAL METHOD
Tack Free Time	sec	-	KIMTEKS INTERNAL METHOD
Free Rise Density	kg/m <sup>3</sup>	23	KIMTEKS INTERNAL METHOD

Data refer to pilot plant laboratory tests made with components at 20°C, HP machine at 140 bar  
Reported values vary depending on processing condition.



## PHYSICAL PROPERTIES

	UNIT	VALUE	STANDART	COMMENTS
Overall Density	kg/m <sup>3</sup>	32	ASTM D 1622	
Core Density	kg/m <sup>3</sup>	30	ASTM D 1622	
Compressive Strength	kPa	130	ASTM D 1621	perpendicular to foam rise
Thermal Conductivity	mW/mK	20,5	ASTM C 518	inital values at 24h at 10°C
Closed Cell Content	%	> 90	DIN EN 4590	
Dimensional Changes	%	max 1%	DIN EN 2786	

Measured values were determined on specimens produced on a laboratory.  
Dimension of the specimen: 30 cm X 30 cm X 10 cm  
Mixing by a mechanical stirrer at 3000 rpm.

## SAFETY CONSIDERATIONS

Firstly, please contact and ask updated material safety data sheet (MSDS) which includin information about own handling, safety and disposal needs of the products. MSDS should be reviewed before handling and using material.

During production, protective eye wear, gloves, safety shoes have to be worn. Chemical should be refrained from contact with skin. In case of contact to skin affected area should be washed with huge amount of wate

## CONTACT INFORMATION

For more information about polyurethane systems in case of need please contact to  
HEADQUARTER OFFICE