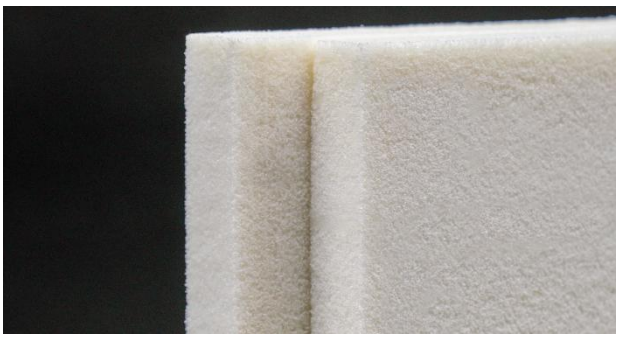
HORIZON
Redefine Materials Frontier

REGEECORE

TECHNICAL DATA



REGEECORE®-LK

HIGH STRAIN PET STRUCTURAL FOAM

REGEECORE®-LK Series is a recyclable linear rigid PET foam core, specially developed for high strain and toughness. Its homogeneous closed-cell structure provides excellent resistance to warpage and delamination during high-temperature, high-pressure molding. With excellent dimensional stability, processability, and thermoforming performance, it is suitable for vacuum infusion, RTM, compression molding, and autoclave, with 100% recyclability.

REGEECORE®-LK Series offers high strain, impact resistance, flexural fatigue resistance, and vibration resistance, with excellent specific stiffness, specific strength, fatigue resistance, low water absorption, hydrolysis and chemical resistance. With 150°C long-term temperature resistance, it is suitable for most high-temperature composite processes and dynamic-load sandwich structures, including wind turbine blades, marine vessels, special vehicles, rail transit, equipment enclosures, and other composite applications.

MECHANICAL PROPERTIES

Property	Test Procedure	Unit	Statistical Value	LK80	LK100	LK150
Density	ISO 845	kg/m³	Max.	90	105	157
			Avg.	80	100	150
			Min.	75	95	143
Compressive Strength	ISO 844:2006	MPa	Avg.	1.1	1.5	2.6
			Min.	0.8	1.2	2.4
Compressive Modulus	ISO 844:2006	MPa	Avg.	120	110	200
			Min.	90	90	160
Tensile Strength	ASTM C297	MPa	Avg.	1.2	2.0	3.0
			Min.	1.0	1.8	2.8
Tensile Modulus	ASTM C297	MPa	Avg.	120	150	200
			Min.	90	130	180
Shear Strength	ISO 1922:2012	MPa	Avg.	0.6	0.85	1.35
			Min.	0.5	0.75	1.1
Shear Modulus	ISO 1922:2012	MPa	Avg.	20	26	50
			Min.	15	23	40
Shear strain	ISO 1922:2012	%	Avg.	15	22	25

***Note:** (1) The above data are average values from routine production tests. Statistical minimum values required by classification societies are available upon request.
(2) Test direction: Out-of-plane direction.

PRODUCT CHARACTERISTICS

- **EXCELLENT RESIN COMPATIBILITY:** Compatible with various resin systems with excellent chemical stability.
- **HIGH-TEMPERATURE RESISTANCE:** Up to 150°C, suitable for vacuum infusion, RTM, compression molding, and autoclave.
- **SUPERIOR MECHANICAL PERFORMANCE:** High compressive, shear, and tensile strength with excellent specific stiffness and strength.
- **LIGHTWEIGHT STRUCTURAL CORE:** Reduces structural weight while maintaining required mechanical performance.
- **ENVIRONMENTALLY FRIENDLY & RECYCLABLE:** 100% recyclable thermoplastic foam for sustainable production.
- **EXCELLENT HYDROLYSIS RESISTANCE:** Resistant to hydrolysis and hydrothermal aging for marine environments.
- **HIGH STRAIN & TOUGHNESS:** Excellent impact, flexural fatigue, and vibration resistance.
- **EXCELLENT FATIGUE RESISTANCE:**Designed for dynamic loads, vibration, and repeated deformation.

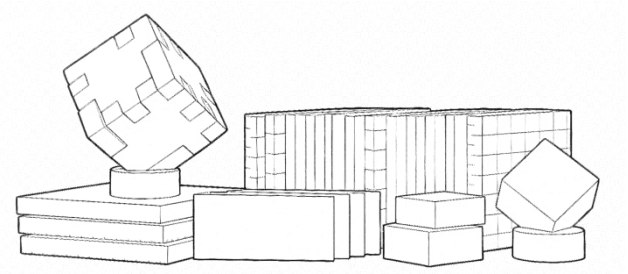
DIMENSIONS

Format	Specifications	Unit	LK80	LK100	LK150
Plain Sheet	L	mm	2500±10		
	W	mm	1020±10		
	THK.	mm	3-1250		

***Note:** The recommended storage life of REGEECORE®-LK foam core is 60 months under proper storage conditions. All technical data are based on tests conducted under specific conditions in accordance with relevant standards. Please verify product suitability for the intended application and ensure compliance with applicable regulations before using. All information is provided in good faith and is believed to be accurate at the time of publication. For the latest data, please contact our technical service department.

Disclaimer:

This data sheet may be subject to revision and changes due to development and changes of the material. The data is derived from tests and practical experience. If not stated as minimum values, the data is average data and should be treated as such. Relevant calculations should be verified by actual tests. The data is furnished without liability for the company and does not constitute any warranty or representation in respect of the material or its use. The company reserves the right to release new data sheets in replacement.



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