

## Technical data sheet

# SOTECO foam - CRIO

on Polyisocyanate

## Characteristics and applications:

**Crio** is a structure foam marked by low thermal conductivity. Due to a special formulation and the special type of the used foaming agent a power saving of up to 20% will be achieved.

**Crio** consists of a cross-linked polymer structure with high density. It has high stability against styrene and is suitable for the use in polyester- epoxy- and vinylester resins.

The fine foam structure guarantees not only excellent thermal but also excellent mechanical characteristics as well as high form stability.

## Further characteristics:

- ▶ low absorption of water (< 0.05 kg/m<sup>2</sup>)
- ▶ low resin absorption
- ▶ styrene stability
- ▶ good mechanical characteristics

## Application fields:

- ▶ Insulation of food containers
- ▶ Insulation of containers and refrigeration units
- ▶ Low temperature-insulation (< - 180°C)
- ▶ Construction (prefabricated house construction)
- ▶ Insulation of pipes in the chemical industry
- ▶ Insulation insert for doors and windows

## Available types:

- CRIO** – Standard version
- CRIO P** – Improved fire protection (DIN 4102 – B2)
- CRIO LF** – Very low thermal conductivity (0.021 w/KM)  
Fire protection classification B3, high flexibility,  
most suitable at radii and on difficult surfaces

## Technical characteristics:

### CRIO

Characteristics	Method	Unit	Values			
Density	ASTM-D 1622	Kg/m <sup>3</sup>	35	40	45	50
Compressive strength	ASTM-D 1621	KPa	240	320	380	400
Compressive modulus	ASTM-D 1621	MPa	8	11	13	15
Shearing resistance	ASTM-C 273	MPa	3.5	5	5.5	5.7
Flexural strength	ISO 178	KPa	330	500	530	560
Flexural modulus	ISO 178	MPa	6	8	8,5	9
Closed cell content	ASTM-D 2856	%	>95	>95	>95	>95
Absorption of water	ASTM-C 272	Kg/m <sup>2</sup>	0.04	0.04	0.03	0.02
Thermal conductivity	ASTM-C 518	W/mk	0.023	0.023	0.023	0.023
HDT	DIN 53424	°C	>140	>150	>150	>150
Use temperature. (min/max)	--	°C	- 180 / + 120			
Standard size	--	mm	1000 x 2000 or 1200 x 2500			
thickness		mm	10-500			

### CRIO P

Characteristics	Method	Unit	Values	
Density	ASTM-D 1622	Kg/m <sup>3</sup>	35	50
Fire protection	DIN 4102	--	B 2	B 2
Compressive strength	ASTM-D 1621	KPa	250	430
Compressive modulus	ASTM-D 1621	MPa	7.0	13.6
Shearing resistance	ASTM-C 273	KPa	200	300
Closed cell content	ASTM-D 2856	%	>95	>95
Absorption of water	ASTM-C 272	Kg/m <sup>2</sup>	0.024	0.072
Thermal conductivity	ASTM-C 518	W/mk	0.022	0.025
HDT	DIN 53424	°C	>135	>180
Use temperature (min/max)	--	°C	- 180 / + 110	
Standard size	--	mm	1000 x 2000 or 1200 x 2500	
Thickness		mm	10-500	10-350

### CRIO LF

Characteristics	Method	Unit	Values
Density	ASTM-D 1622	Kg/m <sup>3</sup>	35
Compressive strength	ASTM-D 1621	KPa	230
Compressive modulus	ASTM-D 1621	MPa	5.7
Shearing resistance	ASTM-C 273	KPa	230
Flexural strength	ISO 178	KPa	400
Closed cell content	ASTM-D 2856	%	>95
Absorption of water	ASTM-C 272	Kg/m <sup>2</sup>	0.025
Thermal conductivity	ASTM-C 518	W/mk	0.022
HDT	DIN 53424	°C	158
Use temperature (min/max)	--	°C	- 180 / + 120
Standard size	--	mm	1000 x 2000 or 1200 x 2500
thickness		mm	10-500

All mentioned information and data are taken from average laboratory values in all conscience.

Due to the big rate of possible influences whilst working and application of this product the user determines the final suitability by corresponding trials. We exclude any guarantee, liability or warranty for the final part. Existing laws and regulations as well as property rights on the part of any third parties must be considered from the buyer in his own responsibility.