



PRODUCT DATA SHEET

UrePac™ Cryanate 4.5

Product Description

UrePac™ Cryanate 4.5 is a two component polyisocyanurate block foam system based on polyether and polyester polyol and MDI isocyanate. The system has been developed with low viscosity and long cream time so it can be dispensed through low and high pressure equipment or hand mixed. The foam was designed for use as a high performance insulation foam for LNG applications.

Part A (Polyol) Specification:

210kg per 205lt Open top drum.

Specific Gravity (22°C):	1.10 +- 0.02 g/ml
Viscosity (Brookfield) (22°C):	300 +- 100 m.Pas
Appearance:	Clear Straw liquid

Part B (Isocyanate) Specification:

250kg per 205lt Closed top drum.

Specific Gravity (22°C):	1.23 +- 0.02 g/ml
Viscosity (Brookfield) (22°C):	210 +- 70 m.Pas
Appearance:	Clear Brown liquid

Processing Conditions:

Temperature

The temperature of both components should be heated in the day tanks to at least 20-25°C to ensure that a sufficient mix and reaction speed is obtained. The optimal temperature of the moulds should be between 35-45°C to achieve optimal skin definition and repeatable results of the finished product.

Application

The mould should be clean, dry and free from oil and grease to prevent skin imperfections or foam collapse. It is recommended that regular calibration shots are conducted to ensure that the correct mix ratio is being achieved. For high pressure units a minimum pressure of 1500psi is required to get sufficient mixing of the components. The entire pour should be completed before the foam begins to rise to achieve the best foam structure.

Cured Foam Properties

Mix Ratio	100 Polyol (Part A): 200 Isocyanate (Part B) (w/w)
Cream Time (22°C):	55+-5 seconds
String time (22°C):	100+-10 seconds
Rise time (22°C):	150+-20 seconds
Free Rise Density (22°C):	45+-5 Kg/m ³

Obtained from Laboratory cup test

Core Density:	42+-2 Kg/m ³
Closed Cell Content:	90-95%
K Value:	0.021+-0.002 W/mK [ASTM C518]
Compressive Strength 22°C:	300 kPa [ASTM.D1621]
-165°C:	750 kPa [ASTM.D1621]
Water Absorption (by volume):	1.42 % [ASTM D2842]
Horizontal Burning:	Extent of Burn: 10 mm [ISO.3582] Extinguishing time: 0 sec Burning Rate: 0.16 mm/sec

Large scale tunnel test:	Flame Spread Index 25 [ASTM E84] Smoke Developed Index 400 [ASTM E 84]
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Storage and Handling

Component A	should be stored under dry conditions out of direct sunlight between 18 and 25°C.
Component B	should be stored separately from <i>Component A</i> , but under the same conditions.

Both products will have a minimum shelf life of six months when stored under these conditions.

It is recommended that **Component A** be mixed prior to use.

If **Component A** is held in storage tanks, the contents must be mixed at least once per day.

Please refer to the Material Safety Data Sheet (MSDS) for further advice on the safe handling of these products.

Transport Classification

Component A:	None
Component B:	None