

TECHNICAL DATA SHEET

PRODUCT NAME: UNIPOL ECOFREPS

GRADES:

- ECOFREPS DDS 5+
- ECOFREPS CCS 5+
- ECOFREPS DDS 6+
- ECOFREPS CCS 6+

PROPERTIES AND APPLICATIONS

EPS (Expandable Polystyrene) contains pentane acting as an expansion agent. UNIPOL ECOFREPS also contains a polymerised flame-retardant ingredient (B1 following DIN4102; EN13163 (Class E)), which produces a material suitable for use as insulation material.

Properties	ECOFREPS DDS 5+/ ECOFREPS DDS 6+	ECOFREPS CCS 5+/ ECOFREPS CCS 6+
Sieves	0.8 - 1.25 mm	1.25 - 1.8 mm
Bead size	0.71 - 1.25 mm (> 85%)	1.12 - 1.8 mm (>95%)
Pentane (%)	≥ 4.8% / ≥ 5.8%	≥ 4.8% / ≥ 5.8%
Bulk density	550 - 650 kg/m ³	550 - 650 kg/m ³
Prefoam density ¹	15 - 30 kg/m ³	14 - 20 kg/m ³
Applications	Shape and Block molding of medium to high density	Block molding of low to medium density
Water content	< 0.5% (w/w)	< 0.5% (w/w)
Control certificate (fire) DIN4102 (B1)	ÜW BWU03-I 16.68 Stuttgart MPA	ÜW BWU03-I 16.68 Stuttgart MPA
BFA Number	2.2797-1	2.2797-1
Control certificate (fire) EN 13163 (Class E)	Kiwa Nederland B.V. Rijswijk (NL)	Kiwa Nederland B.V. Rijswijk (NL)
Report number	FPC-K90998/01	FPC-K90998/01

¹ Depending on the type of pre-foamer, pre-foaming method and/or predefined requirements.

PROCESSABILITY OF UNIPOL ECOFREPS GRADES

ECOFREPS DDS 5+				ECOFREPS CCS 5+			
Achievable prefoam density (kg/m ³)				Achievable prefoam density (kg/m ³)			
Type of prefoamer		Continuous	Batch/ pressure	Type of prefoamer		Continuous	Batch/ pressure
Density	1x	18	15	Density	1 x	17	15
	2x	12	10		2 x	13	10
					3 x	11	
Maturing time as function of temperature and density				Maturing time as function of temperature and density			
Density	Temperature	Hours		Density	Temperature	Hours	
15kg/m³	0-12	16		10kg/m³	0-12	4	
	12-20	8			12-20	4	
	20+	8			20+	4	
20kg/m³	0-12	24		15kg/m³	0-12	12	
	12-20	16			12-20	8	
	20+	8			20+	6	
30kg/m³	0-12	48		20kg/m³	0-12	16	
	12-20	32			12-20	12	
	20+	24			20+	8	

ECOFREPS DDS 6+				ECOFREPS CCS 6+			
Achievable prefoam density (kg/m ³)				Achievable prefoam density (kg/m ³)			
Type of prefoamer		Continuous	Batch/ pressure	Type of prefoamer		Continuous	Batch/ pressure
Density	1x	16	15	Density	1 x	15	14
	2x	12	10		2 x	11	9
					3 x	10	
Maturing time as function of temperature and density				Maturing time as function of temperature and density			
Density	Temperature	Hours		Density	Temperature	Hours	
10kg/m³	0-12	24		10kg/m³	0-12	8	
	12-20	16			12-20	4	
	20+	12			20+	4	
15kg/m³	0-12	48		15kg/m³	0-12	48	
	12-20	36			12-20	36	
	20+	24			20+	24	
20kg/m³	0-12	96		20kg/m³	0-12	96	
	12-20	72			12-20	72	
	20+	48			20+	48	

Maturing times still depending on specific/local circumstances.