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TECHNICAL DATA SHEET

SYSTEM: ULTRAPOL RG 05/55

Polyol (component A): ULTRAPOL RG 05/55
Isocyanate (component B): ULTRAMER B
Application: Polyurethane system for manufacturing of thermal insulation of roofs on industrial and residential buildings by in-situ spray forming. The physical blowing agent is a hydrofluoroolefin compound (HFO) with very low global warming potential (GWP = 1) and ozone destruction potential equal to zero (ODP = 0).

COMPONENTS PROPERTIES:

	comp. A (polyol) ULTRAPOL RG 05/55 comp. A	comp. B (iso) ULTRAMER B	
viscosity at 20°C	500 ± 100	350 ± 100	[mPas]
density at 20°C	1,16 ± 0,02	1,22 ± 0,02	[g/cm^3]
colour	yellow	brown	
storage temperature	5 – 30	5 – 30	[°C]
storage time	3	6	[months]

REACTIVITY IN LAB CONDITIONS

(samples foamed by hand mixing with mechanical stirrer at the speed 2500 ±500 rpm))

Samples weight (ratio A:B by weight)	20 + 22 (100:110)	[g]
Components' temperatures	18 - 22	[°C]
Mixing time	2 -3	[sec]
Start time	5 ± 1	[sec]
Gel time	13 ± 3	[sec]
Tack free time	17 ± 4	[sec]
Core density	55 ± 2	[kg/m^3]

SUGGESTED PROCESSING CONDITIONS

Mixing ratio A : B (by volume)	100:100	
Components temperature	15 - 30	[°C]
Machine heaters temperature	30 - 45	[°C]
Hoses temperature	30 - 45	[°C]
Ambient temperature	10 – 30	[°C]
Surface temperature	10 – 40	[°C]
Components pressure	80 – 110	[bar]
Number of layers	2 – 3	
Thickness of one layer	max 15	[mm]

Sprayed surfaces should be dry, free from oil, dust and dirt that can cause deterioration of the adhesion of the foam. If in doubt about the cleanliness of the surface, it is a good thing to perform the trial spray on a limited area the day before, and if the adhesion is poor, wash and dry the surface before the final spraying.
Before spraying adjacent areas should be protected to prevent from deposition of foam's dust.
If the foam is exposed to direct sunlight it should be covered with a protective layer (eg. protective paint or gypsum board or chipboard).

PROPERTIES OF THE SPRAYED FOAM

Test samples cut from the sprayed insulation.

Foam core density (PN-EN 1602:1999):		≥ 55 kg/m^3
Reaction to fire classification (PN-EN 13501-1+A1:2010):		E
Thermal conductivity (PN-EN 12667:2002):		$\lambda_{mean,i}$ = 0,022 W/mK
		$\lambda_{90,90}$ = 0,023 W/mK
Dimension stability (PN-EN 1604:2013-07)		
	70°C, 90% RH, 48h	l. ≤ +5 %
		w. ≤ +5 %
		th. ≤ +3 %
	–20°C, 48h	l. ≤ -0,5 %
		w. ≤ -0,5 %
		th. ≤ -0,5 %
Compressive strength at 10% deformation, σ_{10} (PN-EN 826:1998)		≥ 300kPa
Tensile strength perpendicular to faces (PN-EN 1607:2013)		≥ 300kPa
Substrate adhesion strength perpendicular to faces (PN-EN 1607:2013)		≥ 300kPa
Content of closed cells (PN-ISO 4590:2005)		≥ 90%

The information given in this technical data sheet bases on our laboratory tests and practical knowledge and cannot be use as warranty of purchaser/user final products' parameters. Our data does not release the user from the obligation to verify the information provided and test our product according to his own application, technological conditions and final purposes.

This data sheet is distributed with the corresponding Safety Data Sheet which contains current information about classification, labeling, handling and safety relevant data.