



FORMULATION  
EPOXY - POLYURETHANE  
POLYURETHANE MOULDING

Date	:	October 6 <sup>th</sup> 2020
Replace	:	

## RAIGITHANE 8809 / HARDENER RAIGIDUR F

### CASTING MATERIAL FOR AUTO-EXTINGUISHING MATERIAL

#### GENERAL DESCRIPTION :

The RAIGITHANE 8809 / Hardener RAIGIDUR F polyurethane system polymerizes at room temperature.

#### MAIN FEATURES:

- This polyurethane system complies with the ROHS Directives (2002/95 / EC).  
It contains no substance of very high concern from the candidate list, nor of the list of substances subject to authorization (Annex XIV to Reach)
- RAIGITHANE 8809 has been formulated with polyols based on renewable resources.
- Rigid material (55 Sh D), black colour
- Use on a low pressure casting machine
- Long gel time for an easier manual execution and a better parts filling
- Excellent degassing after mixing
- Good adherence on metallic and plastic parts
- Great resistance to chemicals
- Auto-extinguishing material, free of antimony trioxide or halogen, pass UL94-V0 at 1.5mm

#### APPLICATIONS :

- Mechanical protection of connexions
- Encapsulation

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**POLYMER PROPERTIES**  
**RAIGITHANE 8809 / HARDENER RAIGIDUR F**

<b>PHYSICAL PROPERTIES (*)</b>	<b>VALUES</b>	<b>UNITS</b>	<b>STANDARDS</b>
	<b>8809_F</b>		
Colour	Black		-
Elastomer density	1.58 ± 0.05		NF ISO 2781
Shore hardness at 25°C	55 ± 5	Shore D	NF ISO 868
Shore hardness at 60°C	44	Shore D	NF ISO 868
<b>MECHANICAL PROPERTIES (*)</b>			
Tensile strength at break	5.6	MPa	NF EN ISO 527
Elongation at break	14	%	NF EN ISO 527
<b>THERMAL PROPERTIES (*)</b>			
Dry aging : 28 days at 120°C			HD631.1 S2:2007
• Weight loss	3.6	%	§7.4
• Shore hardness variation	136	% (/initial)	
Heat Deflection Temperature HDT / B (0.45 N/mm <sup>2</sup> )	< 20	°C	ISO R 75
Thermal conductivity	0.65	W/m°K	ISO 22007-2
<b>DIELECTRIC PROPERTIES (*)</b>			
Dielectric constant at 20°C (55 kHz)	On going		NF C26-230
Loss tangent at 20°C (55 kHz)	On going		NF C26-230
Volume resistivity at 20°C	3 x 10 <sup>12</sup>	Ω.cm	NF C26-215
Surface resistivity at 20°C	> 10 <sup>16</sup>	Ω	NF C26-215
Dielectric strength	> 30	kV/mm/6h	NF EN 60243
<b>AUTO-EXTINGUISH ABILITY (**)</b>			
Classification according to UL94 standard	<b>UL94-V0</b>	<b>1.5 mm</b>	NF EN 60695-11-10 (Report n° DO-20-1861\B-R1)

(\*) measures made after curing 18h at 70°C

(\*\*) tested by an external COFRAC certified laboratory

**PROCESSING CONDITIONS OF THE RAIGITHANE 8809 / HARDENER  
RAIGIDUR F SYSTEM**

	VALUES	UNITS	STANDARDS
<b>RAIGITHANE Resin:</b> (formulated polyol)	<b>8809</b>		
Colour	Black		
Density	1.60 ± 0.05		NF ISO 1675
Viscosity at 25 °C	9 500 ± 1 000	mPa.s	NF EN ISO 2555
Flash point	> 160	°C	NF EN ISO 2592
<b>RAIGIDUR Hardener:</b> (isocyanate )	<b>F</b>		
Colour	Brown		
Density	1.22 ± 0.02		NF ISO 1675
Viscosity at 25 °C	200 ± 40	mPa.s	NF EN ISO 2555
Flash point	> 220	°C	NF EN ISO 2592

		<b>Raigithane 8809</b>	<b>100</b>
<b>Mixing ratio</b>	<b>(weight) :</b>		
		<b>Hardener RAIGIDUR F</b>	<b>12.4</b>
	<b>(volume) :</b>	<b>Raigithane 8809</b>	<b>100</b>
		<b>Hardener RAIGIDUR F</b>	<b>16.4</b>

PROCESSING CONDITIONS	VALUES	UNITS	STANDARDS
	<b>8809_F</b>		
Gel time at 25°C on 100+12.4g	65 ± 10	min	-
Mix viscosity at 25°C			NF EN ISO 2555
Theoretical (calculation)	8 400	mPa.s	
After 5 minutes (measured)	6 000	mPa.s	
Minimum requirements for polymerisation	24 hours at 25°C	-	-




**PACKAGING :**

RAIGITHANE 8809 : 25 - 250 Kg  
 RAIGIDUR F : 30 - 225 Kg

# RAIGITHANE 8809/HARDENER RAIGIDUR F

## PRECAUTIONS

Avoid any contact with skin and eyes.

Wearing gloves , safety glasses  and working clothes  is strongly recommended.

In case of contact with eyes, rinse immediately with plenty of water. If irritation appears, seek medical advice.

After contact with skin, wash immediately with plenty of water and soap.

Work only in ventilated area, far from flame. Use local exhaust extraction over processing area in case of closed areas.

Refer to the Material Safety Data Sheets for additional information regarding safety and working conditions.

## STOCKAGE

RAIGITHANE 8809 can be stored up to 6 months safe from moisture and direct solar radiation, at a temperature of +15° °C to + 30°C, in unopened drums.

Because of the tendency to sedimentation of filled products, in case of a prolonged storage or partial setting apart, it is advised to mix the product in its original packaging before use.

RAIGIDUR F can be stored up to 6 months safe from moisture and direct solar radiation, at a temperature of +5°C to +40°C, in unopened drums.

An opened package must carefully be closed again under nitrogen cover and be stored safe from moisture.

## GARANTIE

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