

**PRODUCT INFORMATION**

**Aliseal** <sup>®</sup>

**PVC 086**

One-component self-extinguishing system for dipping

**Application:**

Dipping. Impregnation and sealing with automatic dispensing techniques and hot curing. Protection and electrical insulation for electronic and mechanical parts from weathering, corrosions, etc.

**Processing:**

The surface of the object to be processed must be cleaned from grease, oils and from other kind of contaminants. Best adhesion results are obtained when the surface is slightly coarse. It is suggested to preheat the pieces to 50-70 °C and to maintain the resin between 15 and 25°C. Dipping speed and curing cycle have to be adjusted to obtain a regular coating, depending on the desired thickness.

**Description:**

One-component self-extinguishing system. Solvent free. High quality electrical characteristics. Excellent adhesion to metallic and non-metallic materials. Coating flexibility ensures an excellent mechanical strength. Uniform covering thickness up to approx. 5 mm in one working process. Long latency for the material when stored to temperature between 0 and 15°C. The system is RoHS compliant (European directive 2002/95/EC) and the new RoHS Directive 2011/65/EU (RoHS 2) entered into force on 21 July 2011 and requires Member States to transpose the provisions into their respective national laws by 2 January 2013.

**Instructions:**

In pre-filled products it is good practice to check and carefully rehomogenize the material if some settling is present. For some applications it can be useful to pre-heat the components and/or carry out a de-aeration step under vacuum of the mixture before casting.

**Curing/Post-curing:**

Hardening is carried out at 150°C-180°C during 4-6 hrs, according to size and material of the object to be dipped.

**Storage:**

One-component resins can be stored for six months in the original, sealed packages in a cool and dry place. The resin must be stored at 0-15°C in a storage room and in the original and sealed drums/tanks. When storing at room temperature (18-25°C) the storage stability is vastly shortened.

**Handling precautions:**

Refer to the safety data sheet and comply with regulations relating to industrial health and waste disposal.

## SYSTEM SPECIFICATIONS

Property	Conditions	Method	Resin PVC 086	Hardener	UM
Viscosity at:	25°C	IO-10-50 (ISO3219)	5.000÷12.000	-	mPas
Density at:	25°C	IO-10-51 (ASTM D 1475)	1,36÷1,44	-	g/ml
Gelation time	80°C	IO-10-52d	3÷12	-	min

## TYPICAL SYSTEM CHARACTERISTICS

Property	Conditions	Method	Value	UM
Resin Colour			Red/Green/Neutral	
Gelation time	130°C (2mm)	IO-10-73 (*)	4÷6	min
	160°C (2mm)	IO-10-73 (*)	3÷5	min
Demoulding time	130°C (2mm)	(*)	10÷16	min
	160°C (2mm)	(*)	8÷12	min
Suggested curing cycles		(**)	2 - 4 hours at 150-180°C	

## TYPICAL CURED SYSTEM PROPERTIES

Properties determined on specimens cured: 2 - 4 hours at 150-180°C

Property	Conditions	Method	Value	UM
Density	25°C	IO-10-54 (ASTM D 792)	1,35÷1,43	g/ml
Hardness	25°C	IO-10-58 (ASTM D 2240)	55÷65	Shore A/15
Glass transition (Tg)		IO-10-69 (ASTM D 3418)	- 20÷- 5	°C
Water absorption (24h RT)		IO-10-70 (ASTM D 570)	0,10÷0,15	%
Water absorption (2h 100°C)		IO-10-70 (ASTM D 570)	0,60÷0,70	%
Linear thermal expansion (Tg -10°C)		IO-10-71 (ASTM E 831)	50÷60	10 <sup>-6</sup> /°C
Linear thermal expansion (Tg +10°C)		IO-10-71 (ASTM E 831)	260÷280	10 <sup>-6</sup> /°C
Flammability		IO-10-68 (V-0)	5	mm
Max recommended operating temperature		IEC 60085 (***)	155	°C
Thermal conductivity		IO-10-87 (ASTM C518)	0,30÷0,40	W/(m°K)
Dielectric constant at:	25°C	IO-10-59 (ASTM D 150)	7,5÷8,5	
Loss factor at:	25°C	IO-10-59 (ASTM D 150)	120÷140	x 10 <sup>-3</sup>
Volume resistivity at:	25°C	IO-10-60 (ASTM D 257)	3 x 10 <sup>11</sup> ÷56x 10 <sup>11</sup>	Ohm x cm
Dielectric strength	25°C	IO-10-61 (ASTM D 149)	20÷22	kV/mm
Flexural strength		IO-10-66 (ASTM D 790)	n.a.	MN/m <sup>2</sup>
Strain at break		IO-10-66 (ASTM D 790)	n.a.	%
Flexural elastic modulus		IO-10-66 (ASTM D 790)	n.a.	MN/m <sup>2</sup>
Tensile strength		IO-10-63 (ASTM D 638)	1,2÷1,8	MN/m <sup>2</sup>
Elongation at break		IO-10-63 (ASTM D 638)	>200	%

**ELANTAS EUROPE Sales offices:**

Strada Antolini n°1 loc. Lemignano  
43044 Collecchio (PR)  
Italy  
Tel +39 0521 304777  
Fax +39 0521 804410

Grossmannstr. 105  
20539 Hamburg  
Germany  
Tel +49 40 78946 0  
Fax +49 40 78946 349

info.elantas.europe@altana.com  
www.elantas.com

**Legenda:**

IO-00-00 = Elantas Europe's test method. The correspondent international method is indicated whenever possible.

nd = not determined na = not applicable RT = TA = laboratory room temperature (23±2°C)

Conversion units: 1 mPas = 1 cPs 1MN/m<sup>2</sup> = 10 kg/cm<sup>2</sup> = 1 MPa

(\*) for larger quantities pot life is shorter and exothermic peak increases

(\*\*) the brackets mean optionality

(\*\*\*) The maximum operating temperature is given on the basis of laboratory information available being it function of the curing conditions used and of the type of coupled materials. For further possible information see post-curing paragraph.

**Disclaimer:**

The information given in this publication is based on the present state of our technical knowledge but buyers and users should make their own assessments of our products under their own application conditions.

**Manufactured: ELANTAS Europe S.r.l. Sito di Strada Antolini n° 1, 43044 Collecchio (PR), Italy**  
**www.elantas.com**