

Permafil® 709

- ▶ Excellent build and retention
- ▶ Good build for moisture and environmental protection
- ▶ Reduced odor
- ▶ UL systems available
- ▶ Semi-flexible at operating temperatures
- ▶ Excellent bond strength

General description

Permafil® 709 is a unique semi-rigid solventless polyester resin designed for dipping and VPI application. It has excellent tank stability and a higher flash point than resins utilizing styrene or vinyl toluene as monomers. It also exhibits low weight loss and electrical properties. Permafil® 709 cures to a clear finish.

Application

Permafil® 709 resin is suggested for motors, generators and transformers where good build, bond strength and electrical properties are needed. It is useful for both form wound and random wound designs. It exhibits excellent electrical properties over a wide range of temperatures and is suitable for use in systems up to 200°C. For suggested process specifications, please contact Von Roll USA, Inc.

Suggested cure cycle: 3-4 hours at 300°F(150°C) or 2-3 hours at 320°F(160°C), after the part reaches temperature.

Health and safety

Material Safety Data Sheets defining the known hazards and describing safety precautions appropriate for this product are available upon request from Von Roll USA, Inc., 200 Von Roll Drive, Schenectady, New York 12306 (518) 344-7100. Similar information sheets for solvents and other chemicals used with this product may be obtained from the appropriate supplier and used accordingly.

Storage Conditions

Permafil® 709 resin can be expected to stay within its specified gel time limits when stored catalyzed for up to 12 months at 77°F (25°C)

Order Data

Permafil® 709 resin is available catalyzed in totes or 55-gallon drums or un-catalyzed in 5 gallon containers or 55 gallon drums from Von Roll USA, Inc. or from authorized Von Roll distributors. For the name of your distributor or for more information on this product, contact our Customer Service department, (518) 344-7100.

Specifications

The properties shown above are typical values only, and should not be used as a basis for preparing specifications. Contact our Customer Service department, (518) 344-7100 for assistance in preparation of specifications for your specific system application.

The product properties set forth in this data sheet are based on the results of testing of typical material produced by the affiliated companies of Von Roll Holding Ltd. (underneath referred as Von Roll). Some variation in product properties is typical. Comments or suggestions relating to any subject other than product properties are offered only to call the end-user's or other person's attention to considerations which may be relevant in the independent determination of the use and/or manner of use of product. Von Roll does not claim or warrant that the use of its product will have the results described in this data sheet or that the information provided is complete, accurate or useful. The user should test the product to determine its properties and its suitability for the intended use. Von Roll expressly disclaims any liability for any damage, harm, injury, cost or expense to any person resulting directly or indirectly from that person's reliance on any information contained in this data sheet. Nothing contained in this data sheet constitutes representation or warranty as to any matter whatsoever. Von Roll makes no warranties whatsoever in this data sheet, expressed or implied, including any implied warranty or fitness for a particular use or purpose. Von Roll shall in no event be liable for incidental, exemplary, punitive or consequential damages.

		Value	Test norm
Physical properties			
Flash point	°F (°C)	≥168 (76)	Pensky-Martens Closed Cup
Volatile content	lbs/gal. (kg)	≤2.9 (1.32)	ASTM D-6053
Viscosity (Brookfield) 77°F (25°C) 20 rpm	cps	1050 ± 150	
Film build on steel (avg.)	mils (mm)	1.5 (0.025)	
Solid content	%	100	
Specific Gravity 77°F(25°C)		1.03	
Gel time (Sunshine) @ 118°C	minutes	22 ± 7	
Viscosity Reducer		tBS	
Weight			
Total weight	lbs/gal. (kg)	8.6 (3.9)	
Electrical properties			
Dielectric strength, Short Time	V/mil(kV/mm)	>4600 (181)	ASTM D-115
Dissipation factor @ 105°C tan delta	%	2.5	ASTM D-150
Dissipation factor @ 130°C tan delta	%	2.2	ASTM D-150
Dissipation factor @ 155°C tan delta	%	1.4	ASTM D-150
Dissipation factor @ 180°C tan delta	%	1.4	ASTM D-150
Dissipation factor @ 200°C tan delta	%	2.6	ASTM D-150
Dissipation factor @ 25°C tan delta	%	0.5	ASTM D-150
Dielectric constant; 60Hz, 77°F (25°C), 50% R.H.		3.9	
Mechanical properties			
Bond Strength (Helical Coil) MW-35 @ 25°C	lb (kg)	32 (14.5)	ASTM D-2519
Bond Strength (Helical Coil) MW-35 @ 155°C	lb (kg)	7 (3.18)	ASTM D-2519