

Winding and bracing

Poly Glas® 76870 Banding Tape

- ▶ Special 220°C formulation designed for high temperature banding applications
- ▶ Moisture Resistant
- ▶ Ideal for DC armatures and commutator assemblies
- ▶ High tensile strength
- ▶ Can be applied with conventional banding equipment

General description

Poly Glas® 76870 is an electrical grade, moisture resistant, parallel glass banding tape, impregnated with an uncured, high temperature, modified polyester resin. During cure, resin flow fills voids and air spaces, producing a homogeneous laminate, with a smooth resin rich surface. This smooth surface reduces the collection of dirt which might otherwise lead to tracking failure. The thermosetting modified polyester resin provides excellent arc resistance and minimizes flashover.

Application

Glass banding is a commonly recognized replacement for steel wire banding on DC armatures and commutators. The parallel yarns allow maximum utilization of the tensile strength of the glass, resulting in low elongation, high retained tensile strength, high modulus strength and excellent impact resistance.

PolyGlas® 76870 is suggested for Class 220°C applications that require a moisture resistant band.

Poly Glas® 76870 moisture resistant banding tapes have replaced steel bands for restraining end turns of DC armatures. Poly Glas® 76870 core bands have replaced wedges for restraining coil bundles in slots, for greater cooling. The use of these banding tapes on commutator assemblies can eliminate the conventional cap-and-cone design on large equipment.

Processing Instructions

Retained tension at operating temperature is critical to performance. While hot banding is recommended, Poly Glas® tapes can be utilized in cold banding applications.

Processing

Banding Tape Tension Recommendations		
Nominal Width	Number of Ends	Recommend Applied Tension
3/8" (9.5mm)	30	250 lbs. (113.4kg)
1/2" (12.7mm)	40	325 lbs. (147.4kg)
3/4" (19.1mm)	60	500 lbs. (226.8kg)
1" (25.4mm)	80	650 lbs. (294.8kg)

Cure Time

Cure time is dependent upon the mass of the banded unit and the temperature of the oven. Once cure temperature for the total mass has been reached, curing for 2 hours at 150°C or 1 hour at 175°C is suggested.

While cure temperatures below 150°C have been used in rare instances for demanding applications, a minimum cure temperature of 150°C is suggested to insure full strength before the rotating unit goes into service. Temperatures of 195°C for up to three hours

		Value (Default)	Value (After curing)	Test norm
Dimensions				
Thickness	mils (mm)	11.5 (0.29)		
Physical properties				
Volatile content	%	≤1		
Weight				
Resin content	%	27 ± 2		
Thermal properties				
Thermal class	°C	220		
Mechanical properties				
Compressive strength -	psi (kg/cm ²)		≥70.000 (4920)	
Tensile strength	psi (kg/cm ²)		≥200.000 (14.000)	
Electrical properties				
Arc resistance	Seconds	≥120		ASTM D 495

produce no degradation of properties.

Shelf life

Poly Glas® 76870 banding tape has a shelf life of up to six months when stored at room temperature of 77°F (25°C) and up to one year when stored under refrigeration at 45°F (7°C). If the tape has been refrigerated, it should be brought to room temperature before use for optimum performance and ease of application.

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.

Specifications

The properties shown in this data sheet 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.

Availability

Poly Glas® 76870 banding tape is available in spools and pads. Spools contain tape wound by traversing across a spindle between flanges. Pads are flat rolls of tape, designed for hand application. Standard tape widths range from 3/8" (9.525mm) to 1" (25.4mm). Pads are supplied in 300' (91.44m) and 750' (228.6m) lengths. Spools are supplied in lengths ranging from 750' (228.6m) to 9000' (2743.2m). This product is available 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.

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.