

TECHNICAL DATA

EFEP RP-5000AS

FEATURES

EFEP RP-5000AS is a static dissipating fluoropolymer specifically designed for the automotive industry. This resin combines the excellent physical and chemical properties derived from ETFE together with a low processing temperature that is more compatible with engineering resins and conventional thermoplastic polymers. EFEP RP-5000AS adheres well to many kinds of plastics without adhesive or etching.

BENEFITS

EFEP RP-5000AS can be easily co-extruded into multi-layer tubing and offers the following advantages for automotive applications:

- Very good permeation resistance to hydrocarbons
- Excellent chemical resistance
- Improved heat aging resistance
- Co-extrusion with other resins (nylons, EVOH, modified PE, and ETFE) without adhesive or etching
- Superior adhesion strength
- Cold impact resistance

TYPICAL APPLICATIONS

Straight and convoluted tubes, mono- and multi-layer tubing, static dissipating tubing for fuel lines.

TYPICAL PROPERTIES*

Property	Unit	Test Method	RP-5000AS
Specific Gravity	-	ASTM D792	1.76
Melting Point	°C	DSC	195
MFR (265 °C, 5kg)	g/10 min	ASTM D1238	2 ~ 8
Tensile Strength	MPa	ASTM D638	29 ~ 50
Elongation	%	ASTM D638	200 ~ 350
Flexural Modulus	MPa	ASTM D790	1400
Permeation Resistance (average)	α.mm/m ² .day	CE-10, 60°C	6.5

(*): Not for specification

The table below shows typical processing conditions for a multi-layer tubing (outer layer: PA12, inner layer: RP-5000AS).

Co-extrusion of PA12 and EFEP RP-5000AS

	Unit	RP-5000AS	PA12
Extruder			
Cylinder diameter	mm	30	40
Screw L/D	-	24	24
Compression ratio	-	3	3
Cylinder temperature:			
C1	°C	260	210
C2	°C	260	220
C3	°C	260	230
AD	°C	265	245
Die temperature	°C	280	
Die I.D.	mm	16	
Tip O.D.	mm	12	
Tubing O.D.	mm	8	
Total wall thickness	mm	1	
Layer thickness	mm	0.25	0.75

SAFETY

When the EFEP RP-5000AS resin is heated to temperatures above 300 °C, some decomposition products may be given off. These decomposition products may be harmful, and inhalation of these fumes must be avoided. Process equipment and working area must be adequately ventilated.

For further information, please refer to the material safety datasheet for these products and the *Guide to the Safe Handling of Fluoropolymer Resins* published by SPI Inc., 1801 K Street, NW, Suite 600K, Washington, DC, 20006-1301 (202-974-5200) or e-mail your questions to EFEP@daikin-america.com.

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