

PLASTIC FORMULA F 217-3



Technical Data Sheet

Highlights

Tri seal F 217-3 is a patented three layer co-extruded product: two solid polyethylene surfaces cover a central layer of foamed polyethylene with closed cells. This structure is a single polymeric unit which cannot delaminate.

Construction: solid PE-EVA / foamed EPE / solid PE-EVA

Tri Seal F 217-3 is developed especially for us in aggressive media where normal LDPE would be subjected to stress-cracking.

The foamed center core provides the resiliency needed for sealing and the solid facings prevent evaporation and product penetration;

Regulatory Compliance

The ingredients of Tri Seal F 217-3 are authorised by the regulations of FDA, BfR and Directive 2002/72/EC and its amendments.

The contact layer of F 217-3 is in compliance with the requirements of the European Pharmacopoeia 6th edition : monograph 3.1.3 and monograph 3.1.5

This formulation is also listed with the **FDA in DMF 12087**

Physical Properties

Standard thicknesses	0,75 - 1,00 - 1,25 - 1,50- 1,75 - 2,00 - 2,25	± 0.12	mm
Density	350	± 10 %	kg/m ³
Shore A 0"	60	NA	
Colour	White	NA	
Compression set 22h/23°C/25%	37	NA	%
MVTR at 37°C	< 1	NA	g/m ² /24hrs
GTRO at 23°C/0% room humidity	0,03	NA	cm ³ /cm ² /24hrs
Available as	Strip widths from 20 mm up to 800 mm, cut liners and gaskets		

These are standard qualities. Other qualities can be produced on demand.

Laminations

For particular applications, especially to increase the barrier abilities, Tri Seal F 217-3 can be laminated with PVDC-film. Also self adhesive Tri Seal F 217-3 liners, supplied on a silicone paper backing, can be produced.

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Advantages

Important advantages of Tri Seal F 217-3 liners are:

Mechanically strong	Excellent chemical resistance
Good compressibility	No lamination, no glue
No discoloration	Good machineability
No absorption	Ideal application and removal torque
No dusting: foam particles cannot come loose	Non-toxic and free of odours and taste
Cost efficient; no additional lamination activity	

Chemical Properties

The special three layer structure ensures not only an excellent mechanical strength; but also a superior chemical resistance. Thanks to the pure and solid polyethylene facings of Tri Seal F 217-3, the product is resistant to the action of a wide range of chemicals like:

Water based solutions	Alcohols	Soap and detergents	Ketones
Acids	Esters	Alcalis	

Method: Complete immersion of precut pieces in testing medium at 23 °C

The information contained herein is to our knowledge accurate and reliable as of the date of publication. It is the customer's responsibility to inspect and test our products in order to satisfy himself as to the suitability of the products for the customer's particular purpose. The customer is also responsible for the appropriate, safe and legal use, processing and handling of our products. Tekni-Plex Europe NV shall not be under a duty to notify you of any changes to the regulations.

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TRI SEAL

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TEST MEDIUM	SWELL PERFORMANCE %/23°C	
	Thickness swell	Thickness swell
	3 days	8 weeks
Acetone	-1	-1
Benzene	3	1
Sodiumhydroxide	0	0
Ethanol	-1	-1
Ethylacetate	-1	-1
R11	5	5
Hexane	4	4
Hydrochloric acid-36%	1	2
Isopropanol	-1	-1
Methylenchloride	2	2
Motor oil	1	1
Perchlorethylene	9	9 (1)
Sodium chloride 30 %	0	0
Toluene	4	4
Water	0	0
Phosphoric acid 85%	1	1
Nitric acid 85%	1	1
Sulpheric acid 99%	1	1

(1) turns transparent and softens after 4 weeks of immersion

Percentages between $\pm 4\%$ can be considered as very good

These data are based on 6 samples of 1 mm thick standard quality Tri Seal F 217-3.

Tekni-Plex Europe NV has performed many chemical resistance and extraction tests. This experience is always at your service.

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Storage and Handling (strip material)

The material must be protected from direct sunlight and high atmospheric humidity during storage.

It is also recommended to store the material at room temperature (15°C – 25°C). If stored at lower temperatures the material should be acclimatized before processing for about 24h until it reaches room temperature (15°C – 25°C).

Further unfavorable storage conditions are large fluctuations in ambient temperature and high atmospheric humidity. These conditions may lead to moisture condensing inside the packaging.

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