


# Felt Bumpers

## Washers, Bumpers

Felt material typically used for oil applicators and air-tight gaskets are offered as bumpers and washers.

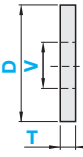
**Felt Bumpers**



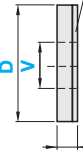
Type	No Adhesive	Adhesive	Material	Density (g/cm <sup>3</sup> )	Color	Allowable Temperature
Washer	WFEP	WFEPA	Polyester Felt	0.2	White	0 ~ 120°C
	WFEH	WFEHA	Polyamide Felt			-50 ~ 250°C
Bumper	BFEL	BFELA	Polyester Felt	Refer to the following		-10 ~ 60°C

\* Allowable temperature for adhesive is 0 ~ 80°C.

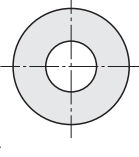
(No Adhesive)



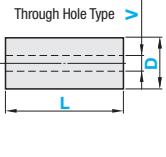
(Adhesive)



Adhesive Seal (Thickness 0.06 ~ 0.10mm)



Through Hole Type



L	Density (g/cm <sup>3</sup> )
10	0.12
20	0.08
30	0.07

### Washer Type

Part Number	Type	D	V Selection	T Selection	Unit Price				
					WFEP	WFEPA	WFEH	WFEHA	
No Adhesive <b>WFEP</b> <b>WFEH</b>		8	0 3	3 (WFEP WFEPA)					
		10	0 4						
		12	0 4 6						
Adhesive <b>WFEPA</b> <b>WFEHA</b> (x1.1)		15	0 4 6 8		4 (WFEH WFEHA)				
		20	0 6 8 10 12						
		25	0 6 8 10 12 16 20						
( ) Material Multiplier	30	0 6 8 10 12 16 20							

\* T dimension for Polyester Felt is 3mm, for Polyamide Felt is 4mm.

### Bumper Type (L dimensions indicate the length of felt base materials. The values are for reference only.)

Part Number	Type	D	L Selection	V	Unit Price		
					L10	L20	L30
No Adhesive <b>BFEL</b>		20	10 20 30	0			
				10			
Adhesive <b>BFELA</b> (x1.1)		30	10 20 30	0			
				10			
( ) Material Multiplier							

\* This product, especially L dimension 20 and 30, may be deformed during delivery.



Ordering Example

Part Number - V - T

**WFEP10 - 4 - 3**

Part Number - L - V

**BFEL20 - 10 - 10**

### Characteristics of Felt

- Excellent in weather resistance. (Affected by alkaline solution.)
- Excellent in oil absorbability. It has the property of soaking up oil by capillary action.
- Excellent in oil absorbability. It can absorb up to approx. 80% of its total volume.
- Has good polishing characteristics. Provides high polishing characteristics as it precipitates foreign materials within its tissue.

### Features of Materials

Material	Details of Material	Application Example
Polyester Felt (Sheet)	Felt made of 100% polyester Soft with Density of 0.18 ~ 0.2. General-purpose Product.	Applicable to general purpose use as oil / water absorption, cushioning materials, etc.
Polyester Felt (with Binder)	PET : PET Binder (Bonding Material) =9:1 Fibers bonded together by the binder provides high morphological stability.	Protection material and bumper for portions exposed to high impact.
Polyamide Felt	Felt made of 100% polyamide Excellent heat/flame resistances. UL Std. Test V-0 Equivalent.	Heat Resistant / Flame Retardant Bumpers
Sheep Wool Felt (Rayon, PET)	Felt made of 60 % sheep wool and 40% PET. JIS-R25W2 Standard Product. Excellent in oil/water retention ability.	Cushion Material, Liquid Application (Oiling), Spacer
Sheep Wool Felt	Felt made of 100% sheep wool Gives less damage to mating materials.	For Buffing
Polyester Felt (Bumper Type)	Density may vary depending on L dimensions.	Oil Application to Workpieces

\*The application examples above are references not guaranteed.