
UBW-1412

FIP Ni/C EMI shielding material

1. Product Description

UBW-1412 is a high-temperature curing nickel/carbon conductive adhesive. It is an ultra-soft conductive adhesive that significantly reduces hardness through material formulation while ensuring conductivity and adhesion. After curing, the adhesive surface remains soft, and the cross-sectional shape does not deform or collapse. It features ultra-low hardness, good elasticity, and low permanent compression deformation. It adheres well to various metal and plastic surfaces, making it suitable for applications in optical modules, telecom base stations, radar equipment, handheld terminals, and consumer electronics.

2. Features

- ①Wear-resistant and high temperature resistant
- ②90dB Excellent EMI shielding effect with shielding efficiency exceeding 90dB
- ③High-temperature curing ensures strong molecular bonding
- ④Saves raw materials, labor, and assembly time
- ⑤ Eliminates high mold costs and supports rapid prototyping



3. Product Specifications

Item No.	Unit	Parameter	Test Method
Appearance	–	Gray-black paste	Visual inspection
Viscosity	cP	55000±5000	
Thixotropic Index	–	≥3.5	
Density	g/cm ³	1.6±0.2	ASTM D792
Curing Conditions	–	25℃*48Hr	Aluminum substrate
		100℃↑*30min	
Post-cure Properties			
Volume Resistivity	Ω·cm	≤0.03	MIL-DTL-83528C
Volume Resistivity after High Temp Aging (150℃ @ 48h)	Ω·cm	≤0.03	
Volume Resistivity after High Temp & Humidity Aging (85℃ / 85% RH @ 1000h)	Ω·cm	≤0.03	
Adhesion	N/cm	≥12	FGS-500TV-S Fully automatic pull-push tester
Hardness	–	45±5	Shore A hardness tester
Tear Strength	N/mm	≥5	ASTM D624
Tensile Strength	MPa	≥0.6	ASTM D412
Shielding Effectiveness (0.2 - 18 GHz)	dB	>100	MIL STD 285
Operating Temperature	℃	-55~160	ASTM D1329

4. Product Packing

30ML / 55ML syringe packaging; 300ML tube packaging

5. Storage And Shelf Life

①It is recommended to store in a freezer at -30 to -10°C . Under normal conditions, the product can be preserved for 3 months.

②Before use, warm up at $(25 \pm 2^{\circ}\text{C})$ for 1 hour.

6. Caution

①Contact with skin may cause temporary redness; wash with soap and water immediately.

②If ingested, induce vomiting immediately and seek medical treatment.

③ If adhesive contacts eyes, rinse immediately with water for at least 15 minutes and seek medical attention.

The data contained in this bulletin is provided only as a guide for evaluation/consideration. These material characteristics are typical properties that are based on a limited number of samples tested in the laboratory. We cannot assume responsibility for results obtained by others or whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or method. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.

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