



Ele-earth EMI 51ac

Precautions

1. Review SDS for hazard and toxicity information.
2. Degrease the surface completely before application.
3. Mixing with thinners other than the recommended product may cause the paint components to separate with time and compromise performance.
4. Use immediately after dilution.
5. Keep the product tightly sealed and store in a cold, dark place.
6. Shelf life is three months after shipment for the paint and one year after shipment for the thinner. Use immediately after opening.
7. The product is intended for indoor use; avoid outdoor use or exposure to direct sunlight for long hours.
8. Some paints have weaker film layer adhesion than others. Please test adhesion before application.
9. Film surface resistance varies with film thickness. Be sure to accurately control the film thickness.
10. Should you require a primer, please consult our sales representative.



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Electromagnetic Shielding Paint



Ele-earth EMI

51ac

Provides excellent electrical conductivity and
electromagnetic shielding performance

Acrylic type

Normal temperature drying

1pack

Silver-copper
conductive material



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Ele-earth EMI 51ac

Characteristics

Superior electrical conductivity and electromagnetic shielding properties

Containing hybrid conductive material that combines the advantages of silver and copper, EMI51ac is made using Edogawa Gosei's original production process. It provides long-term, stable electrical conductivity and electromagnetic shielding properties.

Easy-to-use

EMI51ac is an acrylic resin based one-component paint that dries at room temperature. It saves users the time and trouble of mixing the base paint with a curing agent, as would be needed with a two-component type curing paint. When dealing with large quantities, the coating can be forced dried at 60 - 80 degrees Celsius.

Long storage stability

Solidifying of paint due to the precipitation of conductivity materials, which occurred with previous electromagnetic shielding paints, is no longer a problem with EMI51ac. Even if conductivity materials precipitate during storage*, the product is easily returned to its original form by simply stirring before use.

*The shelf life is three months after shipment.

Intended use

Electromagnetic shielding for plastic products

Color

Dark brown

Packaging

Paint Ela-earth EMI 51ac : 18kg / 4kg

Thinner Thinner1300S : 16L / 3.8L

Directions for use

1. Surface preparation

Degrease the surface completely before application.

2. Stirring

Stir the product well before use as conductive components or other materials may have settled during storage.

3. Mix with a thinner

The mixing ratio by weight is 10 : 2-4 (10 parts base: 2-4 parts thinner).
Use Thinner 1300S for dilution.

4. Application

Air pressure	0.3-0.5MPa
Nozzle size	1.2-1.5mm
Film thickness	20-30 μ m
Coating quantity	about 300g/m ²

5. Dry

Set-to-touch time	25°C×10minutes
Dry-hard time	25°C×5-6hours
Forced dry time	60-80°C×30minutes

※ For forced drying, leave aside at ambient temperature with a setting time of 10 - 15 minutes after applying.
※ Check the heat resistance temperature of plastic substrates before using the forced-dry method.

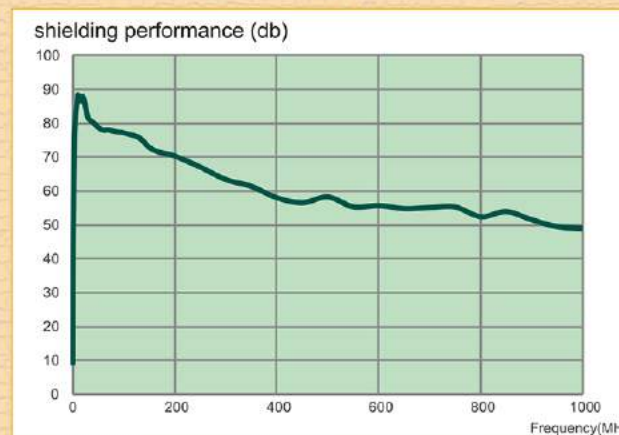
Performance

Film performance test results

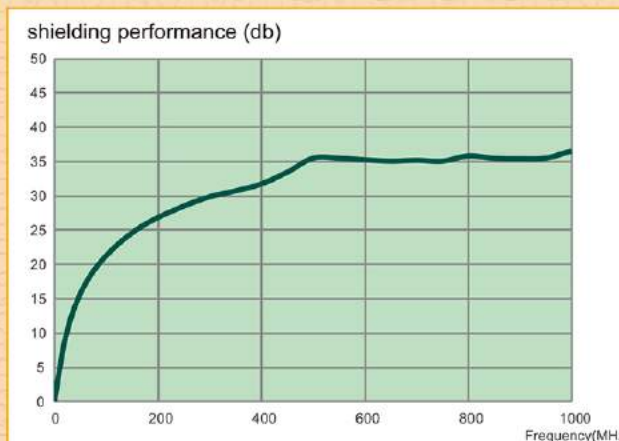
Test Item	Test Condition		Result	Our Standard
Pencil Hardness	Film hardness tester using pencils(1 kg of load)		F	HB≤
Adhesion	Cross-cut test(ABS plate)		100/100	95/100
	Cross-cut test(PC plate)			
	Cross-cut test(acrylic resin plate)			
Water Resistance	Put in purified water (25℃) for 168 hours and left at ambient temperature for another 24 hours	check appearance	Passed	no appearance abnormality
		Secondary adhesion	100/100	95/100
		Electric conductivity	Passed	1.0Ω≥
Humidity Resistance	Put in 98% humidity at 50℃ for 168 hours and left at ambient temperature for another 24 hours	check appearance	Passed	no appearance abnormality
		Secondary adhesion	100/100	95/100
		Electric conductivity	Passed	1.0Ω≥
Alcohol Resistance	IPA rubbing 500g (round trips)		Passed	50 times≤
Heat Resistance	Put at 90℃ for 96 hours and left at ambient temperature for another 24 hours	check appearance	Passed	no appearance abnormality
		Secondary adhesion	100/100	95/100
		Electric conductivity	Passed	1.0Ω≥
Electric conductivity	Two-terminal method (anode-cathode distance:10mm)		0.7Ω	
Resistance Value	Four-point probe method		4.0×10 ⁻² Ω	7.0×10 ⁻² Ω≥
Surface Resistivity	Four-point probe method		1.8×10 ⁻¹ Ω／□	3.0×10 ⁻¹ Ω／□≥
Volume Resistivity	Four-point probe method		4.5×10 ⁻⁴ Ω·cm	7.0×10 ⁻⁴ Ω·cm≥

※All tests except the paint adhesion test were performed on a film with a thickness of 20 μ m on an ABS plate, dried at 80°C for 30 minutes, and left at ambient temperature for seven days.

Electric field shielding performance



Magnetic field shielding performance



Test Condition

1. Film thickness : 20 μ m
2. Test plate material : Phenolic resin plate
3. Drying condition : 80°C×30min, and left at ambient temperature for another 3 days

※The test result do not guarantee the quality and performance of our product under all conditions.