

ELECTROCONDUCTIVES

DOTITE XO-9048

**Under
Development**

1. Product Introduction

- Printable magnetic filter paste designed for improving the readability of HF band (13.56MHz) RFID tags in an environment with metal.
- Printable magnetic shield paste effective against radio noise (300kHz ~ 3MHz).
- Utilizes technology to closely align the special soft magnetic flake powder filler, making it possible to realize effective magnetic permeability.
- By printing the magnetic shielding to match the shape of the manufactured label, material loss can be reduced, which can lower overall cost.

2. Specifications

	XO-9048	Remarks
Composition	Special soft magnetic flake powder Polyurethane resin	—
Storage	Room temperature	—
Appearance	Grey liquid	—
Viscosity	180 dPa·s	DSTM-201 E type viscometer, 3° cone, 5rpm at 23°C
TI Value	2.3	0.5rpm value/5rpm value
Application Method	Metal mask printing	—
Drying Conditions	150°C, 30 mins.	Forced convection oven

※ This DOTITE product is under development and the above values may not be final.

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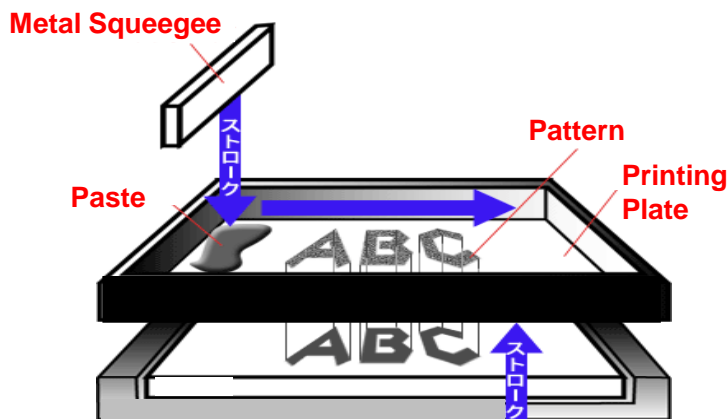
DOTITE XO-9048**Under
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- Keep this DOTITE product away from open flames.
- Apply this paste to a clean substrate.
- This DOTITE product utilizes a metallic filler with an especially high density. During storage the metallic filler will separate and settle. Before use, mix thoroughly until the filler is evenly distributed. If it is not sufficiently mixed before use, performance may be affected.
- Reseal after use and store in a cool, dark place.
- Recommended drying conditions are listed above in section 2, "Specifications." However, environmental factors, or film thickness may affect the drying process. It is recommended that drying conditions be confirmed on-site before use.
- For other handling and safety information, please refer to the SDS documentation for this product.
- This product may be subject to export restrictions depending on the country in which the recipient is located. Please confirm with Fujikura Kasei that this product can be shipped to your country.

The above data are derived from tests conducted by Fujikura Kasei under lab conditions and do not represent this product's properties in all environments. We recommend that the curing conditions, cured film properties, safety precautions, overall applicability for the user's intended purpose, and other factors be confirmed on-site before use.

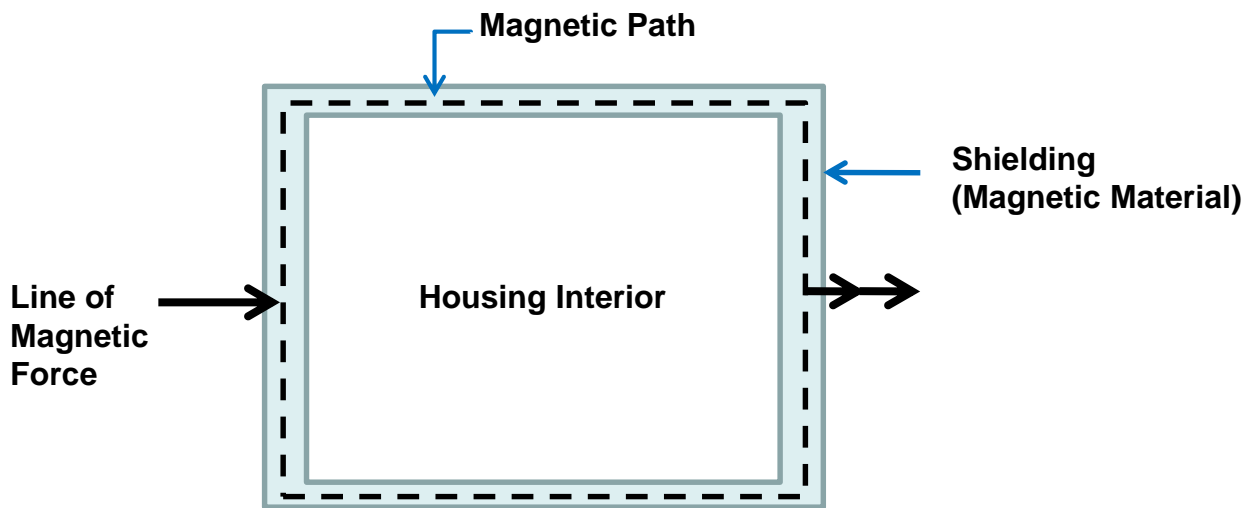
Printing Conditions

Printing Plate	Metal mask, 100μm plate thickness
Squeegee	Metal
Squeegee Speed	30mm/s
Squeegee Pressure	0.250MPa
Back Pressure	0.100MPa



By printing the magnetic shielding to match the shape of the manufactured label, material loss can be reduced, which can lower overall cost.

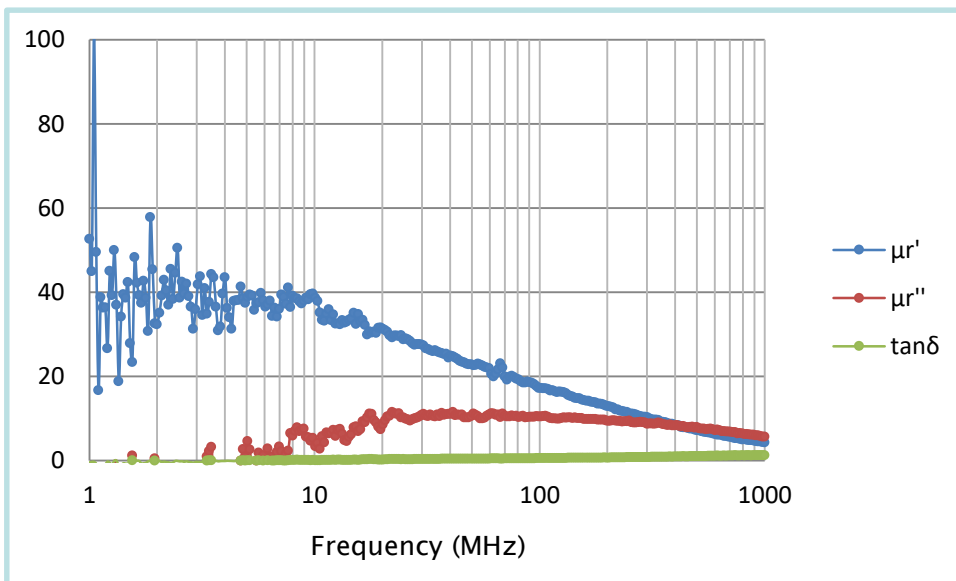
Magnetic Shielding



This is a shield to minimize the interference of magnetic fields of 10 MHz or lower. By using a material with high permeability that magnetic force can pass through easily, a pathway for magnetic force is formed, protecting the interior from magnetic interference.

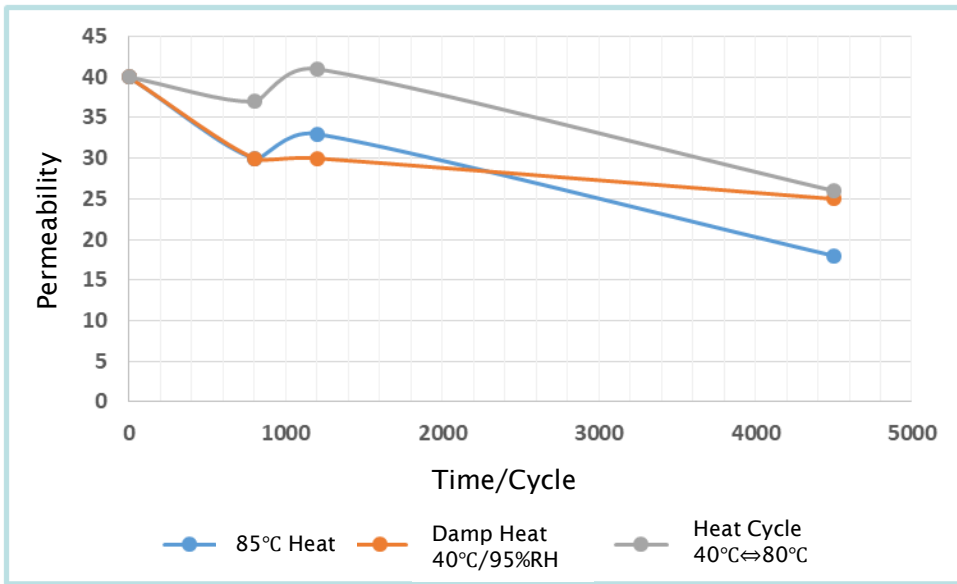
The more magnetic force is able to pass through the cured film, the better the magnetic shield performance is.

Complex Permeability Graph



Complex Permeability Measured by
Agilent E4991A RF Impedance/Material Analyzer

Reliability Data



Test	Test Conditions	Adhesion
Heat Resistance	85°C	100/100
Damp Heat	40°C/95%RH	100/100
Heat Cycle	-40°C⇔85°C (30 mins. each; exposure to room temp., 5 mins.)	100/100

Measurement Conditions:

Magnetic properties: Agilent E4991A RF Impedance/Material Analyzer; derived from complex permeability measurement

Adhesion: 100 square crosscut tape test (on ABS)I, remaining squares out of 100 recorded as a fraction.