

Highly Electroconductive Organic Nano Metal Organic Solvent Fluid

Experimental Products

ORMECON®

Introduction

Nissan Chemical Industries, Ltd. has begun full market development of **ORMECON®**, a highly electroconductive nano-sized special polymer composed by aniline and/or thiophene dispersed in organic solvent that is co-created by Nissan Chemical and Ormecon GmbH, Germany. The need for easily processable, highly conductive polymers has grown dramatically in recent years as technology for electronics, energy and information industries rapidly advance. In particular, organic solvent dispersed highly electroconductive nano-sized special polymer will bring you for a Roll to Roll process to plastic substrates, are predicted to grow dramatically due to their easily processable properties.

Characteristics

Organic Solvent Fluid ORMECON® has the following characteristics :

- No In-situ polymerization has required
- High electro conductivity (an Organic Metal) and humidity independent
- Thin film has superior transparency and low haze (green color)
- Excellent dispersion properties (colloidal dispersion fluid)
- Redox-active property

Representative Physical Properties

The representative physical properties of **Organic Solvent Fluid ORMECON®** are as follows:

Grade Name		NX-C001X	NB-A001
Type of solvent		Xylene	n-Butanol
Surface resistivity (Ω/\square)	*1	7E+01	6E+01
Conductivity (S/cm)	*1	310	140
Transmittance (%)	*2	70	57
Haze	*3	10	40
Solid (%)		3.9	4.5
Viscosity (25°C, mPa·s)		15	810
Water (%)		<0.5	<0.5
Particle diameter (nm)	*4	180	200<
Particle shape		Fiber type	
Type of dopant		type of Sulfonic acid	
Additive		—	Benzyl alcohol and 1-Octanol

*1 : Wet film thickness : 25 μ , dry condition 100°C./10min and measured by Loresta IP tcp-t250(Mitsubishi Chemical)

*2 : Measured by TOP SCAN Model TC-1800 MK II(Tokyo Denshoku), Results are excluded substrate itself.

*3 : Measured by SPECTRAL HAZE Meter TC-H3DPK-MK II (Tokyo Denshoku), Results are excluded substrate itself.

*4 : Measured by Microtrac® UPA 250(Microtrac)

Applications

Organic Solvent Fluid ORMECON® can be used for a broad range of application, such as utilization transparent electrode for touch panel, an antistatic, electromagnetic interference (EMI) shielding and special conductive ink for nano-print technology. However, in some cases, our company may not be able to accommodate your request. Please feel free to contact us for further details.

*1: Data in this catalogue indicates an example of measured value.

*2: The information furnished is believed to be accurate and complete.

Buyer assumes all risk of use, storage and handling of these samples. Nissan shall not be construed as a permission or recommendation for the use of these samples in the infringement of any existing patent.

*3: The samples are described on this catalogue is still under R&D stage, and therefore all data might be changed without any notice.

Other Products

Our company also manufactures and sells **CELNAX®**, an inorganic electroconductive metal oxide sol. We would appreciate your consideration on this product as well.



Handling Precautions

The organic fluid **ORMECON®** are flammable and can be hazardous. Please use appropriate PPE and apply caution in handling.

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