ITOTONE 127

ORGANOCLAY RHEOLOGICAL ADDITIVE FOR SOLVENT BASED SYSTEM

PROPERTIES

- **Appearance :** Light Yellow, Free-flowing Powder
- **Moisture Content (@105°C, 2 hrs) :** < 3.5%
- **Granularity (<76µm or 200mesh) :** > 98%
- **Viscosity (Xylene:n-butanol= 4:1) :** > 1.0 Pa•S
- **Viscosity (7% xylene gel, 25°C) :** > 3.0 Pa•S
- **Loss on Ignition (@800-900°C) :** < 38%
- **Heavy Metal (Pb) :** <15 ppm
- **Heavy Metal (Cd) :** <15 ppm
- **Heavy Metal (Cr) :** <15 ppm
- **Heavy Metal (Hg) :** <15 ppb
- **Arsenic (As) :** < 5mg/kg

APPLICATION

- **Solvent Polarity range :** Benzene. Ester, ketone, ether mixed solvent
- **Dispersion Conditions :** High speed dispersion and polar activation
- **Addition method :** Pre-gel or dry powder
- **Organoclay addition :** 10% ITOTONE 127
- **Solvent addition :** 87% Xylene / n-butanol (4:1) recommended
- **Activator addition :** 3% of either 95% ethanol or 95% methanol

CHARACTERISTICS

1. Free-flowing powder and light yellow in colour. Applicable to high polar solvent systems, especially in solvent which contains aromatic, alcohols or esters, it has good thickening and thixotropy.
2. Need with high speed dispersing and polar activator, the pre-gel addition is better
3. Used in anticorrosion paints, industrial paints just like container paints, marine paints, anti-rust paints, etc.
4. Similar to Bentone-27

DISCLAIMER

The information herein offered is based on the best of our knowledge at present. However, we are not able to guarantee these matters, as the result of application may vary according to conditions adopted. Preliminary tests are, therefore, recommended in all cases. Please refer to MSDS regarding handling of the products.

example results

	95%ethanol:MIBK:Organoclay =4.5:4.5:1 Be dispersed under 1000r/min shear for 5min,using Brookfield viscometer RV6 to test (mpa·s)		95%ethanol:MIBKOrganoclay =4.54.51 Be dispersed under 2000r/min shear for 5min,using Brookfield viscometer RV6 to test (mpa·s)	
MP—250	(6r/min) 1533	(60r/min) 423	(6r/min) 1833	(60r/min) 450
ITOTONE 100A	(6r/min) 1433	(60r/min) 253	(6r/min) 1500	(60r/min) 283

MAGNACOLOURS®
IMAGINATION INK™

MagnaColours® Limited
Upper Cliffe Road,
Dodworth Business Park,
Barnsley, S75 3SP, UK

T: 00 44 (0) 1226 731751
F: 00 44 (0) 1226 731752
E: info@magnacolours.com
www.magnacolours.com

Company registered in England No. 01378495, VAT No. GB 997 3172 70

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APPENDIX

Pre gel addition

ITOTONE 100 is made up of lamellar structure polymer. Under shear, solvent penetrates the capillary gap and causes wetting. This leads to lamellar structure polymer de-agglomeration. Addition of high shear or a polar activator under low shear causes the lamellar polymer structure become separated completely and form a gel structure as edge to edge hydrogen bonding occurs making a structure like a house of cards. This is known as pre-gel addition.

Preparation of pre-gel

1. Add 85-87% of solvents or mixed solvents
2. Add ITOTONE series organoclay and disperse at high speed (2500rpm for 5-10 minutes)
3. Add polar activator and disperse at high speed (2500rpm for 15-20 minutes).

Addition of ITOTONE pre-gel

A. For poor wetting resin systems use in combination with surfactant and use the following addition process.

1. Charge resin and solvents and mix.
2. ITOTONE pre-gel mixture and mix.
3. Surfactant.
4. Pigment and disperse
5. Dilute

B. For poor wetting capacity resin and non thixotropic grind materials use the following addition process

1. Charge resin and solvents and mix.
2. Surfactant (if required)
3. Pigment
4. Disperse to the desired fineness with grinding
5. ITOTONE pre-gel
6. Disperse completely to desired fineness
7. Dilute.

Dry powder addition

When a resin has good wetting capacity a special can be used as lamellar structure polymer is separated. The gel structure depends on the surface solvent wetting and shear conditions. Addition as a dry powder is possible directly before the mill process. This type of addition is known as dry powder addition. This method is not recommended for direct post addition to adjust the final viscosity or if a resin does not have good wetting capacity.

A. For good wetting capacity resin and grind material systems

1. Charge resin and solvents and mix
2. ITOTONE organoclay powder and mix for 10 minutes
3. Polar activator and mix for 10 minutes
4. Surfactant
5. Pigment (colour disperse)
6. Dilute

B. For poor wetting resin, addition process is a s follows:

1. Solvents
2. ITOTONE organoclay powder, mix for 10 minute
3. Polar activator mix for 5-10 minute
4. Resin (mix)
5. Surfactant
6. Pigment (disperse)
7. Dilute.

See example results table overleaf

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