

# ITOTONE 100

ORGANOCLAY RHEOLOGICAL ADDITIVE FOR SOLVENT BASED SYSTEM



## PROPERTIES

- **Appearance** : White, Free-flowing Powder
- **Volatiles (@105°C, 2 hrs)** : < 4.0%
- **Granularity (<76µm or 200mesh)**: > 95.0%
- **Loss on Ignition (@800-900°C)** : < 42%
- **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** : Styrene, epoxide resin, unsaturated polyester resin
- **Dispersion Conditions** : Dispersion speed >400r/min then no Polar activator needed
- **Addition method** : Pre-gel at any stage
- **Organoclay addition** : 6% ITOTONE 100
- **Solvent addition** : 94% styrene recommended
- **Activator addition** : None

## CHARACTERISTICS

1. ITOTONE 100 organoclay rheological additive is a new style product with easily dispersing, no bug dust input. It is for low, middle and high polarity systems. It can be dispersed without polar activator and high-shear mixers. It is a special dispersion in styrene and alcohol solvents and has ideal thickening and rheological properties.
2. ITOTONE 100 is suitable for solvent-based paints & coatings, adhesives, as thickener in sealants, rheological additives for resin and as thixotropic agent in oil-based well drilling slurry as thixotropic. It is more suitable than gas SiO<sub>2</sub> in unsaturated resin and epoxy resin systems. It can obviously decrease the cost and improve thixotropic effect.
3. ITOTONE 100 can be added in any step without polar activator. The disperse speed exceeds 400r/min. It can also be into pre-gel in styrene, xylene, 200# and the other mixed solvent.
4. The dosage of ITOTONE 100 is 0.2-0.6% of all systems and 1-6% for special purpose, example the spraying unsaturated resin.

## 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.

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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. Add ITOTONE pre-gel mixture and mix.
  3. Add surfactant.
  4. Add 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. Add surfactant (if required)
  3. Add pigment
  4. Disperse to the desired fineness with grinding
  5. add ITOTONE pre-gel
  6. Disperse completely to desired fineness
  7. Dilute.

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