

Product Data

Fine Particle Silicone Resin **TOSPEARL 120**

TOSPEARL 120 is a silicone micro resin for use as an additive to improve the performance of plastics, rubbers, paints, etc. In addition to providing the specific characteristics of silicones, such as water repellency and lubricity, TOSPEARL 120 has a lower specific gravity than conventional inorganic fine powders and also has excellent heat resistance as compared with conventional organic fine powders.

KEY FEATURES

- ◆ Excellent water repellency
- ◆ Excellent lubricity (light lubrication)
- ◆ Lower specific gravity than inorganic fine powder
- ◆ Superior to organic fine particles in heat resistance
- ◆ Insoluble in organic solvents
- ◆ Low cohesiveness
- ◆ No melt even if heated to 900°C
- ◆ Upon calcination, gives truly spherical silica fine particles
- ◆ When charged negatively, amount electrified is large
- ◆ Sharp particle size distribution

APPLICATIONS

- ◆ Rubber Industry: Improvement in wear resistance, modification of slip properties of rubber surfaces
- ◆ Paints and Ink: Clarification of color tone, luster control, blocking prevention, wear resistance improvement
- ◆ Synthetic Resin: Increasing wear resistance of synthetic resins such as epoxy, acrylic, polyester, and ABS; blocking prevention, slip property improvement, and maintenance of transparency of plastic films such as PE and PP
- ◆ Others: Improvement in dispersibility, flowability and aggregation prevention of pigments and ceramic particles

TYPICAL PROPERTY DATA

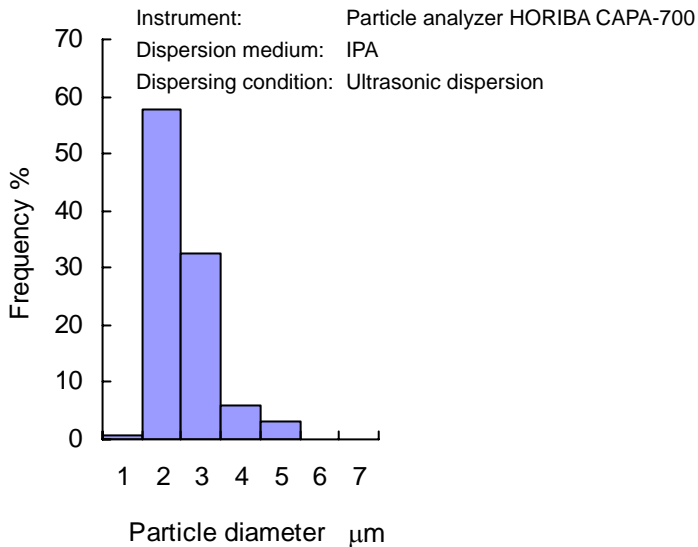
PROPERTIES	
Appearance	Truly spherical, fine white particle
Mean particle diameter μm	2.0
Mean particle diameter μm	2.0

Weight loss (250°C, 30min)	%	0.7
pH*		7.0
True specific gravity (25°C)		1.32
Bulk specific gravity		0.35
Specific surface area	m ² /g	30
Linseed oil absorption	ml/100g	75

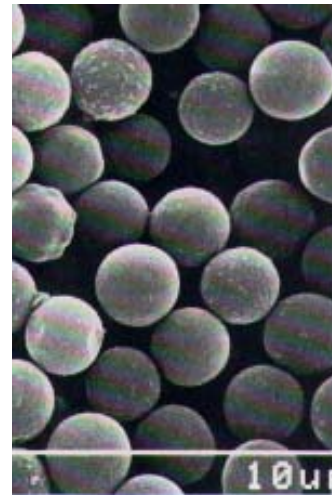
*: 2% dispersed in a solution of Methanol/Water=1/1

Typical property data values should not be used as specifications.

PARTICLE SIZE DISTRIBUTION

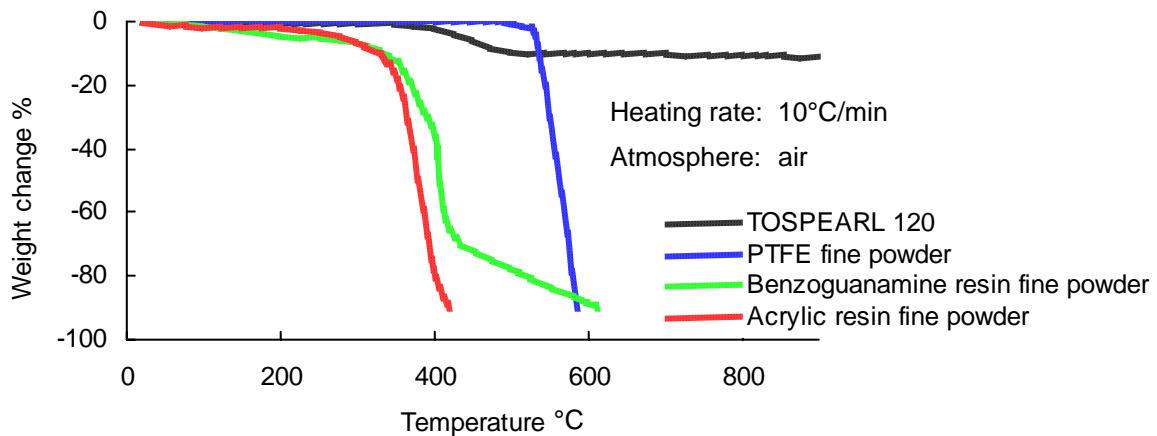


ELECTRON MICROGRAPH

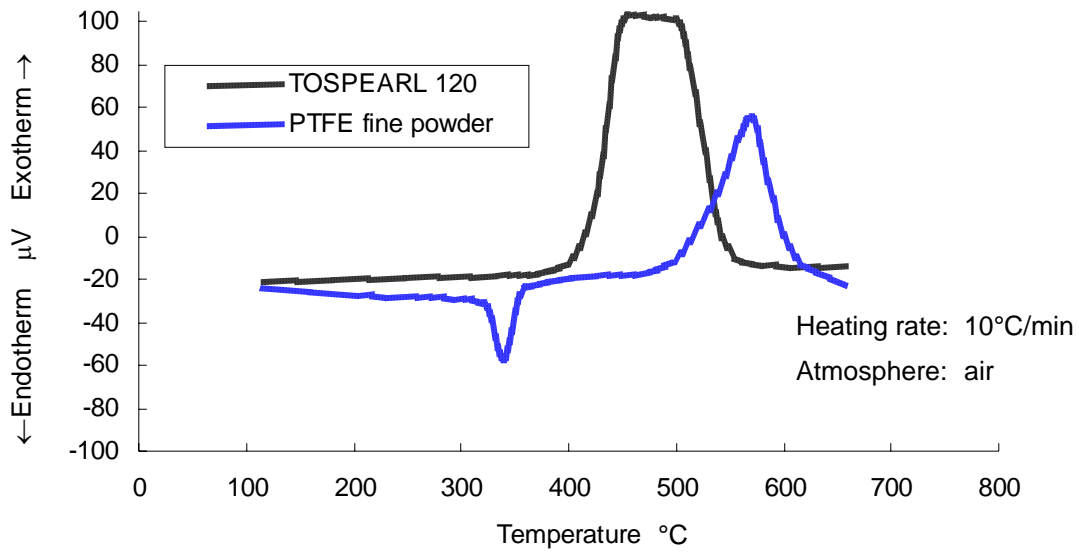


HEAT RESISTANCE

Thermogravimetric analysis data of TOSPEARL 120 and other organic resin fine particles are shown below.

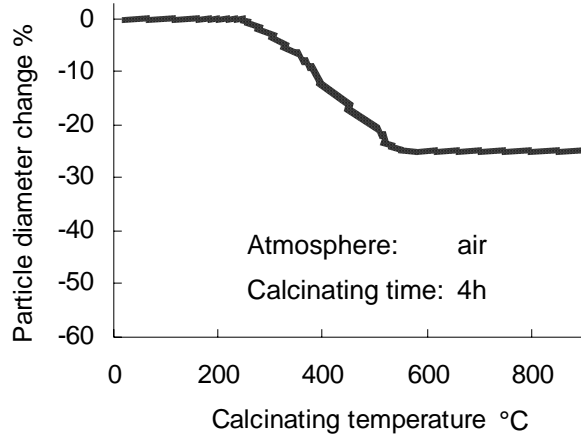


Differential thermal analysis data of TOSPEARL 120 and PTFE fine particle are shown below.



EFFECT OF CALCINATION

When TOSPEARL 120 is calcinated in air, the particle diameter changes, depending upon the calcinating temperature, and finally changes into silica. After calcination, it maintains truly spherical configuration. Particle diameter change data of TOSPEARL 120 after calcination are shown below.



HANDLING AND SAFETY

- ◆ Wear dust mask, eye protection and protective gloves as required while handling the product.
- ◆ Use the product in a well ventilated area.

STORAGE

- ◆ Store in a cool, dry place out of direct sunlight.
- ◆ Keep out of the reach of children.

PACKAGING

- ◆ 1kg plastic bottle available
- ◆ 10kg corrugated cardboard box available

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Product Data

Fine Particle Silicone Resin **TOSPEARL 2000B**

TOSPEARL 2000B is a silicone micro resin for use as an additive to improve the performance of plastics, rubbers, paints, etc. In addition to providing the specific characteristics of silicones, such as water repellency and lubricity, TOSPEARL 2000B has a lower specific gravity than conventional inorganic fine powders and also has excellent heat resistance as compared with conventional organic fine powders.

KEY FEATURES

- ◆ Excellent water repellency
- ◆ Excellent lubricity (light lubrication)
- ◆ Lower specific gravity than inorganic fine powder
- ◆ Superior to organic fine particles in heat resistance
- ◆ Insoluble in organic solvents
- ◆ Low cohesiveness
- ◆ No melt even if heated to 900°C
- ◆ Upon calcination, gives truly spherical silica fine particles
- ◆ When charged negatively, amount electrified is large

APPLICATIONS

- ◆ Rubber Industry: Improvement in wear resistance, modification of slip properties of rubber surfaces
- ◆ Paints and Ink: Clarification of color tone, luster control, blocking prevention, wear resistance improvement
- ◆ Synthetic Resin: Increasing wear resistance of synthetic resins such as epoxy, acrylic, polyester, and ABS; blocking prevention, slip property improvement, and maintenance of transparency of plastic films such as PE and PP
- ◆ Others: Improvement in dispersibility, flowability and aggregation prevention of pigments and ceramic particles

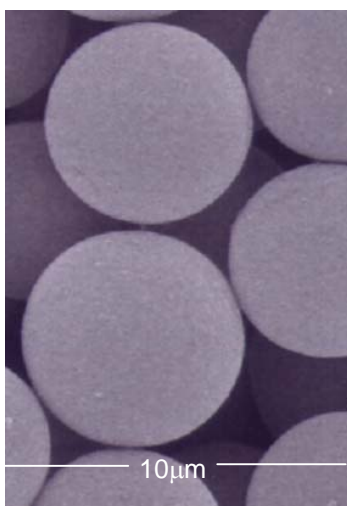
TYPICAL PROPERTY DATA

PROPERTY	
Appearance	Truly spherical, fine white particle
Mean particle diameter μm	6.0
pH*	7.0
Weight loss (250°C, 30min) %	0.7
True specific gravity (25°C)	1.32

Note: *2% dispersed in a solution of Methanol/Water=1/1

Typical property data values should not be used as specifications.

ELECTRON MICROGRAPH



HANDLING AND SAFETY

- ◆ Wear dust mask, eye protection and protective gloves as required while handling the product.
- ◆ Use the product in a well ventilated area.

STORAGE

- ◆ Store in a cool, dry place out of direct sunlight.
- ◆ Keep out of the reach of the children.

PACKAGING

- ◆ 1kg plastic bottle
- ◆ 10kg corrugated cardboard box available

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