Toraypearl® TPC

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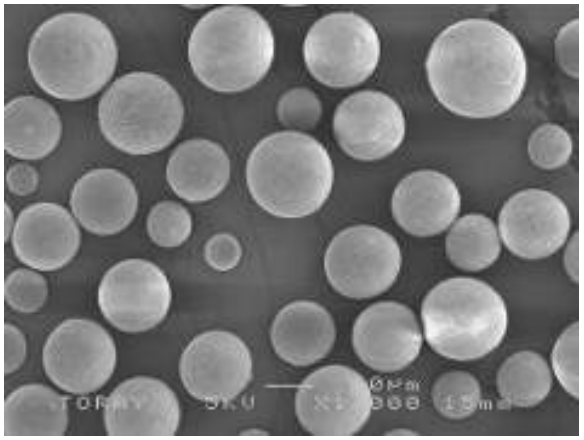
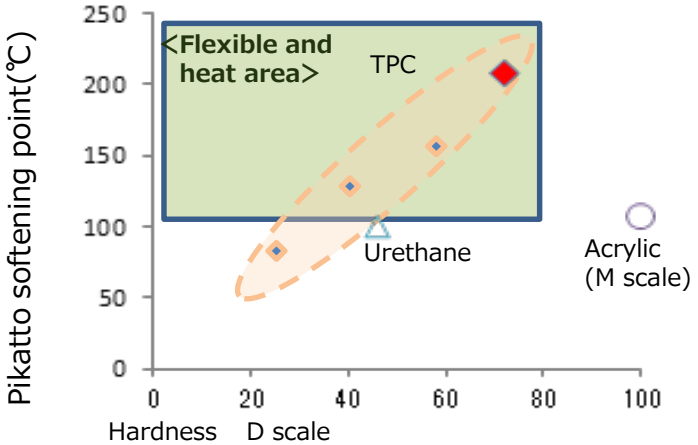
【S E M image】



Material	Thermoplastic Elastomer
Average of particle size（μm）	5 – 6 0 ※
Form of sample	Powder or hydrous cake
Specific gravity	1． 2 8
Glass transition Temp.（℃）	5 0
Melting point（℃）	2 2 0
Thermal reduction Temp.（℃）	3 6 2

There is a possibility to grant of wear resistance and sliding properties, also the improvement of the operating environment temperature and the processing temperature width.



※Usually, We have the sample of 12 micron in average of particle size.

Toraypearl® PES

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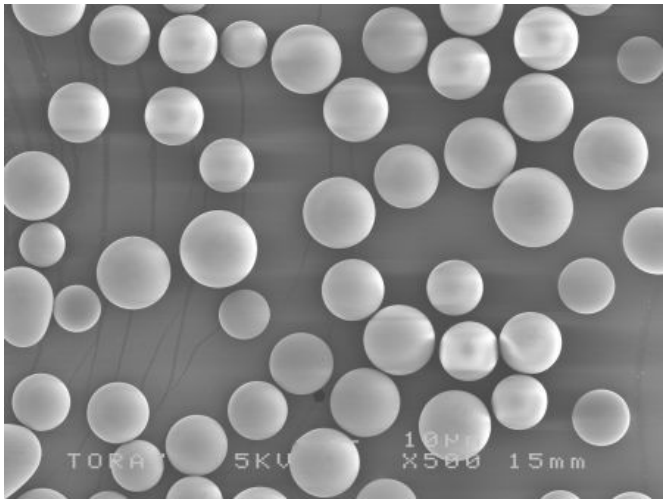
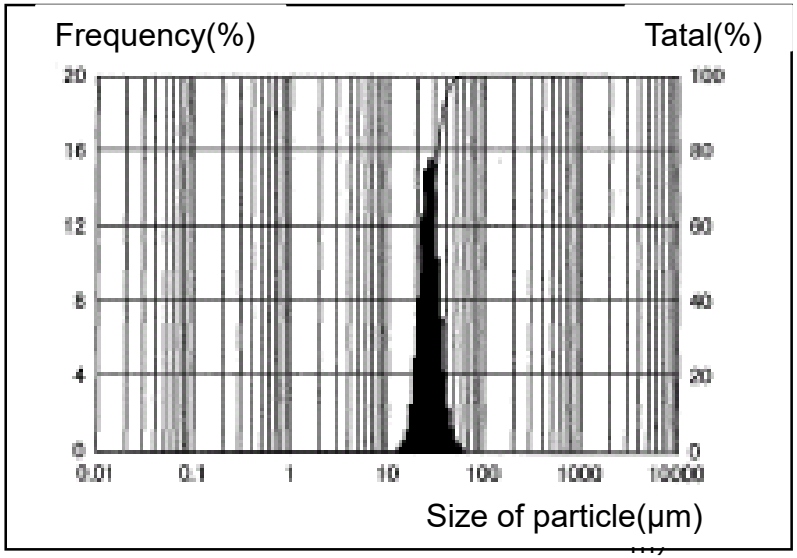
【S E M image】



Material	Polyether Sulfone resin
Average of particle size （μm）	5 – 6 0
Form of sample	Powder※
Specific gravity	1． 3 7
Glass transition Temp.（℃）	2 2 5
Melting point（℃）	–
Thermal reduction Temp.（℃）	4 4 2
Refractive index	1． 6 5

【Particle size distribution】



※Average of particle size adjustable to above range.
※Usually , we have the sample of 30μm in average of particle size.

Toraypearl® PVDF

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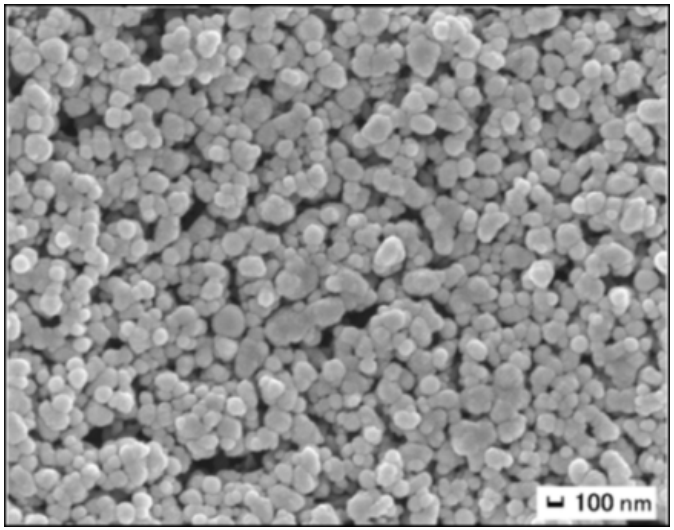
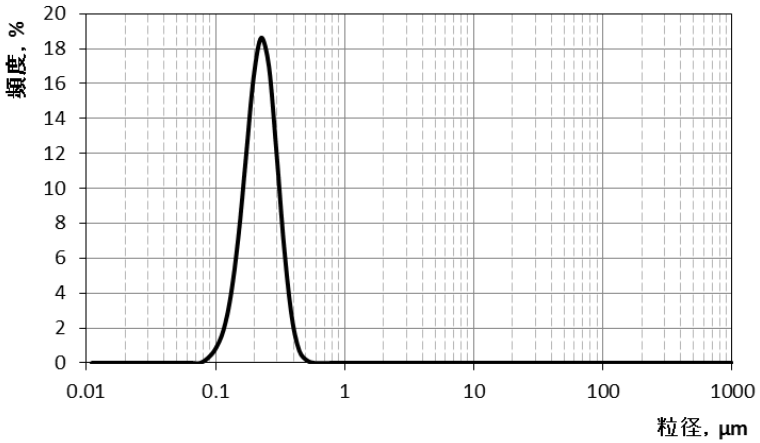
【S E M image】



Material	Polyvinylidene fluoride
Average of particle size（μm）	0．2－0．5
Form of sample	Cake / Dispersion ※
Specific gravity	1．75－1．78
Melting point（℃）	151－178

【Particle size distributin】



○It is possible to make PVDF
whose molecular weight is about one million.

Torayrearl® EP

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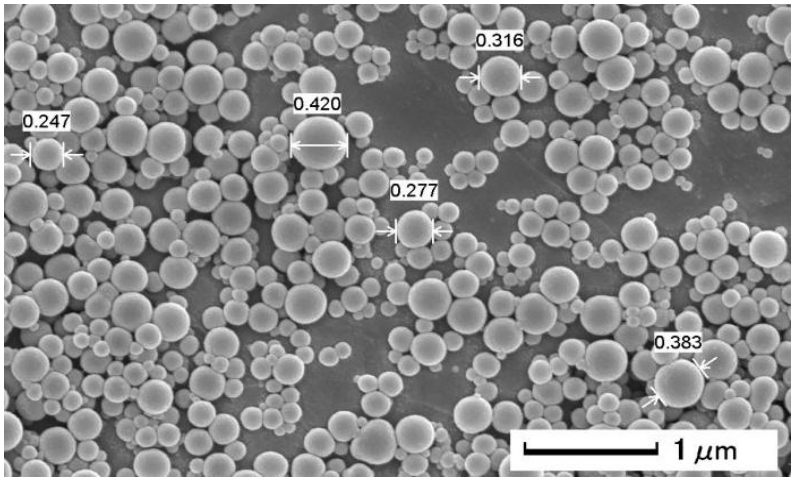
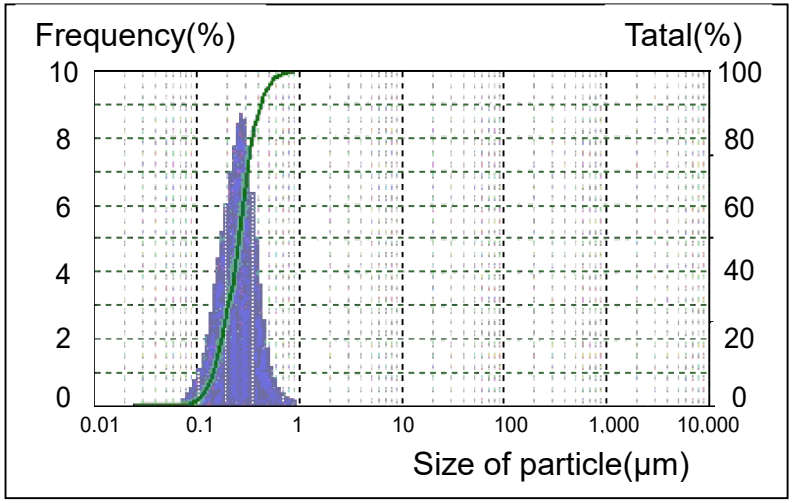
【S E M image】



【Particle size distribution】



Material	Epoxy resin (Cured)
Average of particle size (μm)	0．2－0．3 5－40
Form of sample ※	Powder or water dispersion
Specific gravity	1．25
Glass transition Temp. (℃)	130
Melting point (℃)	－
Thermal reduction Temp. (5%) (℃)	300
Refractive index	1．55－1．61

※Micron particle : Powder.
Submicron particle : Water dispersion.
※Concentration of water dispersion is about 30%.
※Now, Because of the lab corresponding level, since it may take time to provide us.Please understand.

Toraypearl® PLA

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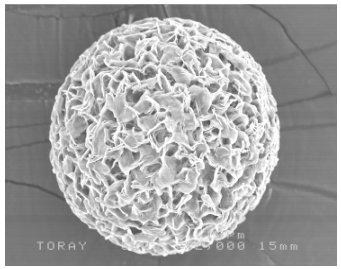
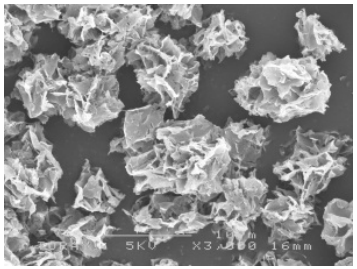
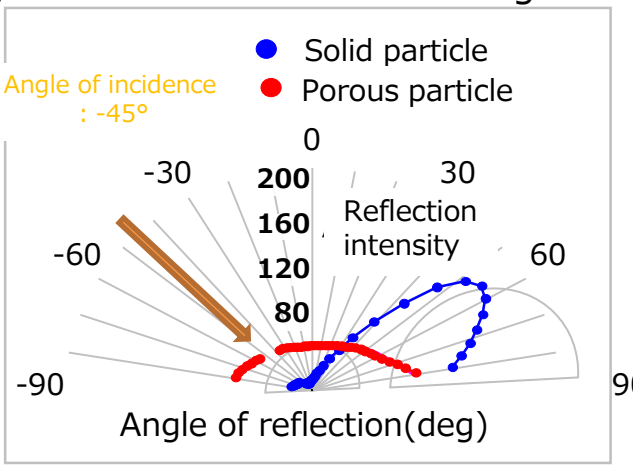
【S E M image】

Low oil absorption	High oil absorption
	

【Form : porous】
The reflected light in all directions.
And, can be brushed and matte grant.



Material	Polylactic acid
Average of particle size(μm)	3 0
Form of sample	Powder※
Specific gravity	1．2 6
Bulk density（g/cm^3）	0．1 8
Glass transition Temp.（℃）	6 0
Melting point（℃）	1 6 0
BET Specific surface area (m^2/g)	4．3
Oil absorption of linseed oil (ml/100g)	1 4 4

※Measured value : In case of 30μm particle
Average of particle size is adjustable to the range of 5-30μm

※Solid particles also available .

Toraypearl® EC

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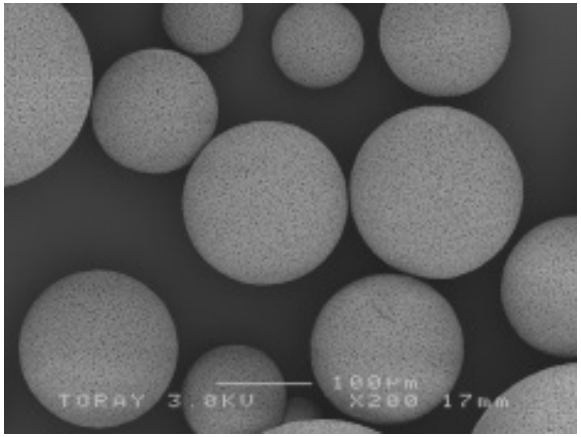
【S E M image】



Material	Ethyl cellulose (Ethyl degree: 49%)
Average of particle size(μm)	１００—２００
Form of sample	Powder
Specific gravity	１．１４
Bulk density (g/cm^3)	０．４３
Melting point (℃)	１６０
Oil absorption of linseed oil (ml/100g)	１００－１５０

Drug loading image

○It is possible to include drug inside the porous as a base material for the formulation used in tablets, granules.
○Average of particle size can control in the above range.
○Ethyl cellulose is the material that has been recognized as pharmaceutical excipients.

Nylon particle

Toray Industries, Inc. sells Nylon6,Nylon12 particle as products except for 「Toraypearl® 」 (Developed products) , as cosmetic applications (slip-improving agent of the foundation, etc.), it has been widely used.

	SP		TR	
Material	Nylon12		Nylon6	
Form of sample	Powder		Powder	
Average of particle	5	10	13	20
Spherical of particle	Spherical		Nearly spherical (porous)	
Specific gravity	1.02		1.13	
Melting point	165℃		210～220℃	
Thermal reduction Temp.(5%)	421℃		403℃