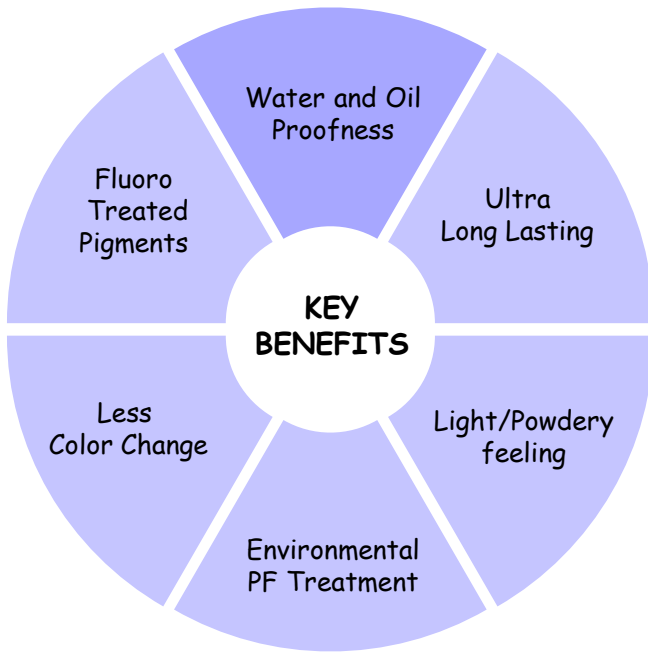
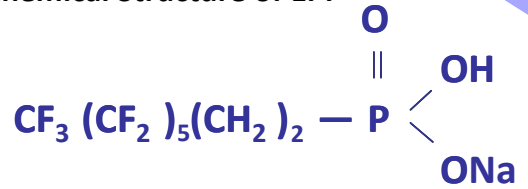


COMPOSITION	
INCI Name	SODIUM PERFLUOROHEXYLETHYL PHOSPHONATE



Chemical Structure of EPF



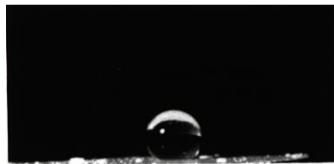
Standard grade

Category	Product
Talc	EPF TALC S
Sericite	EPF SERICITE S
Mica	EPF MICA S
TiO2	EPF TiO2 R250
Yellow iron oxide	EPF YELLOW No.602P
Red iron oxide	EPF RED No.211P
Black iron oxide	EPF BLACK No.710P

Contact Angle (Water)



Non Treated  
TiO<sub>2</sub>

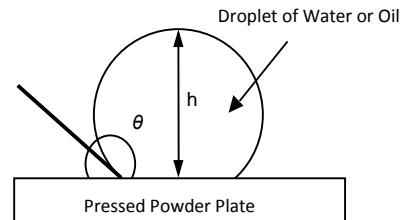
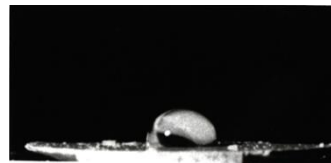
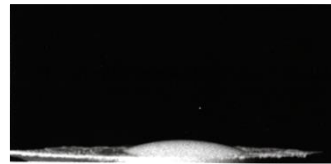


Silicone Treated  
TiO<sub>2</sub>



EPF Treated  
TiO<sub>2</sub>

Contact Angle (Oil)



Contact Angle Measurement

Surface Tension

$$\gamma = \frac{\rho gh^2}{2(1-\cos\theta)}$$

Cosmetic benefits

- Water proof and sebum proof
- Provide very long lasting effect
- Imparts powdery/light texture and feel

Use guideline

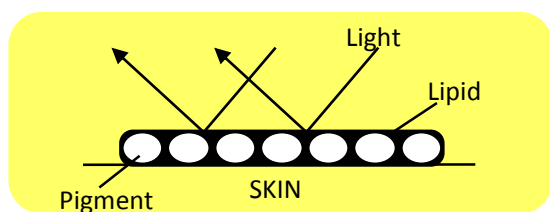
- Suitable for W/Si and W/O emulsions
- Emulsions: Disperse in the oil phase, add water phase into oil phase, and emulsify
- Powders: Mix with other powders

Chemical and physical properties

- Easier to disperse in cyclomethicone or low viscosity dimethicone (low surface tension media)
- Good oil proofness with squalane or hydrocarbon (high surface tension media) for powder to cream application

## Mechanism of Formulation of EPF Pigments

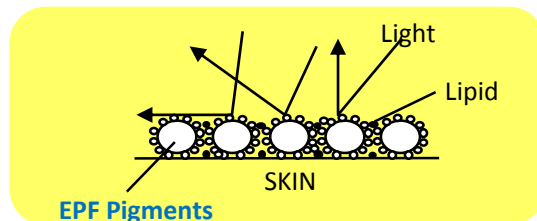
### Conventional Make-up Products



Particles of pigments can be compatible with lipid (sebum) from the skin, so it is mixed with lipid, and the layer of lipid on the surface of make-up finishing reflect the light strongly.

**(Shiny & Greasy appearance)**

### Novel Make-up Products with EPF Pigments



EPF Pigments are not compatible with lipid, so the natural and powdery appearance can be maintained for a long time.

**(Long Lasting Effect)**

## Applications

### Powder Foundation

DF/J090 Matte Stay 2Way Powder Foundation



### Liquid Foundation

DL/J127 Super Long Lasting Liquid Foundation D5 Free

## Safety and regulatory information

**Material Safety Data Sheets** are available for all DAITO KASEI products.

**REACH:** The ingredients, unless they are exempted, are registered or will be registered on May 2018.

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