

MALIALIM[®] series

MALIALIM[®] SC series

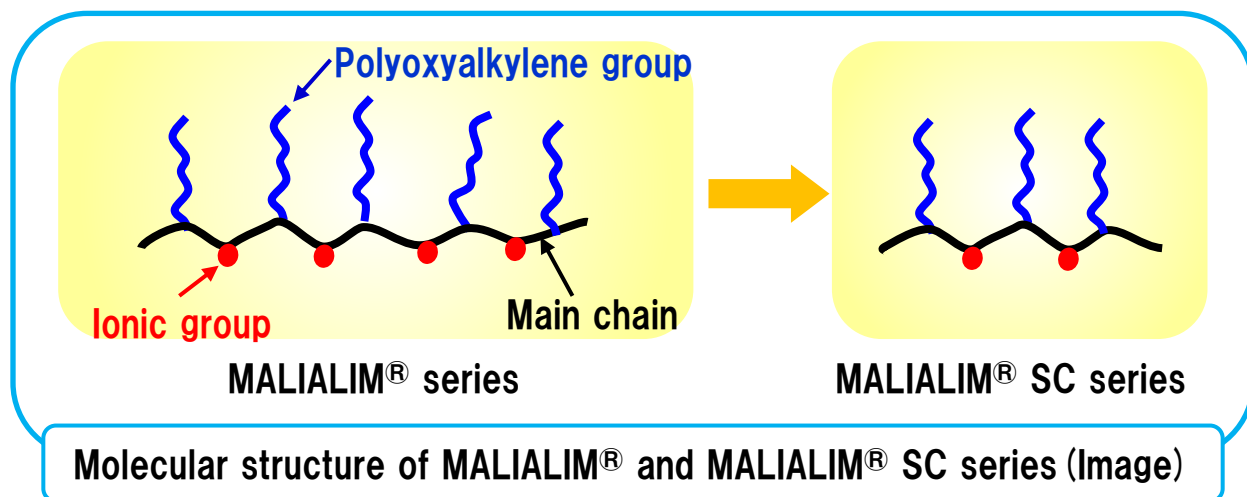
1 MALIALIM[®] and MALIALIM[®] SC series

MALIALIM[®] series are new functional polymers that have polyoxyalkylene groups on side chain and ionic groups on main chain, which can be used as dispersant both for inorganic and organic powders.

Polyoxyalkylene group : It gives steric-repulsion effects or acts as segments improving dissolution.

Ionic group : It acts as segments that adsorb on to the surface of powder.

MALIALIM[®] SC series has main chain length shorter than MALIALIM[®] series. According to the main chain length is short, MALIALIM[®] SC series shows good dispersibility to fine particle (1 μm or less).



2 Feature

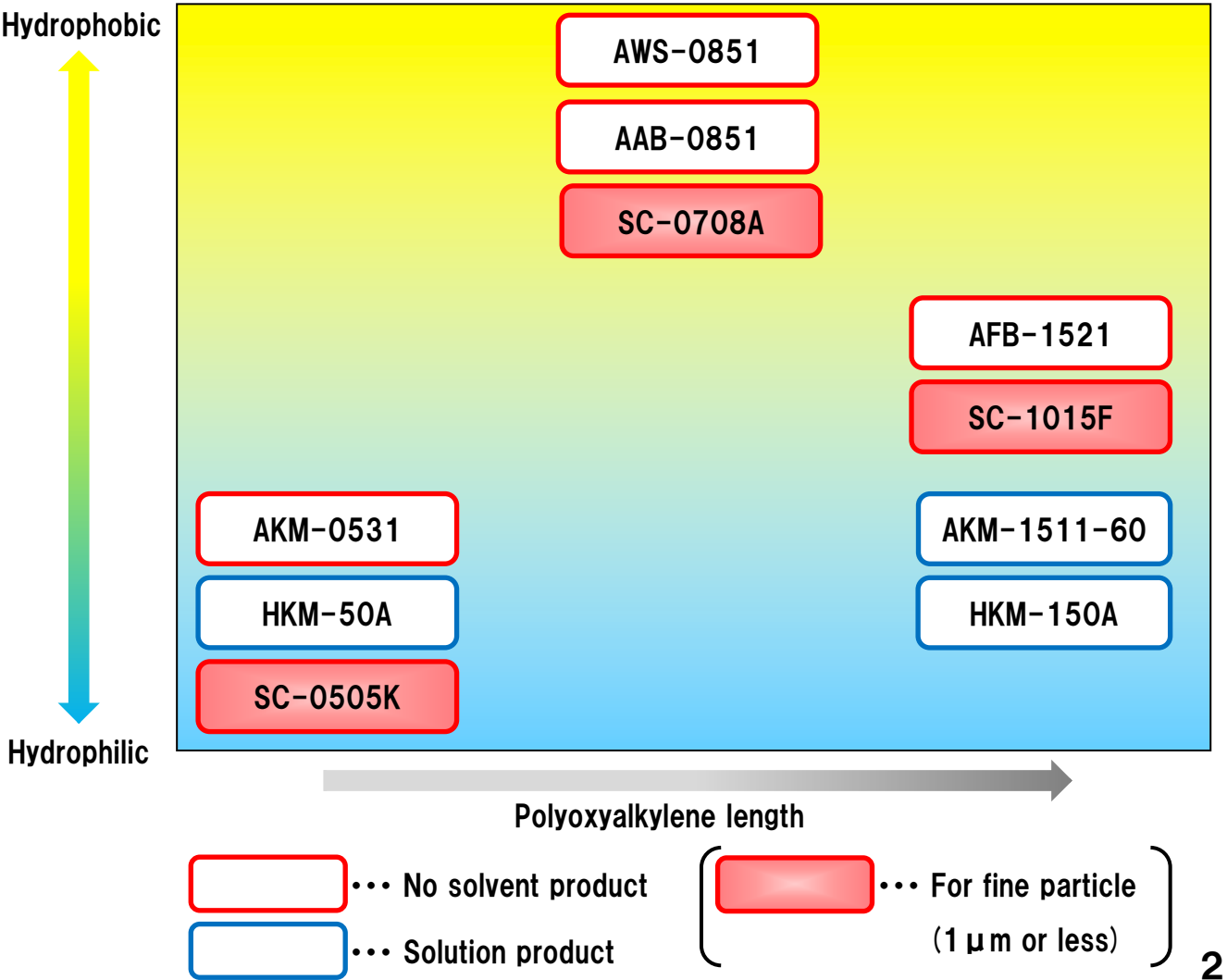
- ◆ Especially, it shows good dispersibility to inorganic powder, it prevents particulates from flocculation and reduces the viscosity of dispersion system.
- ◆ Almost product are 100% solid content, and don't contain impurities such as an alkaline metal and halogen.
- ◆ High solubility for various solvent.
- ◆ It shows good thermal decomposition under air and N₂ atmosphere.

3

Properties

Item	Appearance (25℃)	pH	Viscosity (mm ² /s, 25℃)	Solid content (%)
AKM－0531	Yellow or brown liquid	2～4	10, 000	100
AFB－1521			6, 000	
AAB－0851	Yellow liquid		16, 000	
AWS－0851			32, 000	
SC－0505K			2, 000	
SC－1015F	Yellow or brown liquid		2, 000	
SC－0708A			5, 000	
AKM－1511－60		2～4	450	60
HKM－50A	6～8	250	50	
HKM－150A		300		

(Representative values, not values of standard.)



4 Solubility

Item	Water	Ethanol	Butyl cellosolve	Terpineol	PGMEA*	Toluene
AKM-0531	○	○	○	○	○	○
AFB-1521	△	○	○	○	○	○
AAB-0851	×	△	○	○	○	○
AWS-0851	×	△	○	○	○	○
SC-0505K	○	○	○	○	○	○
SC-1015F	△	○	○	○	○	○
SC-0708A	×	○	○	○	○	○

*PGMEA: Propylene Glycol mono Methyl Ether Acetate

○: Soluble △: Emulsification ×: Insoluble

(5wt% Solution, at 25°C)

5 Additive amount

The additive amount of MALIALIM® and MALIALIM® SC series are normally from 0.5 to 5wt% (for powder weight). As the optimal additive amount strongly depends on particle size or surface area of powder, we recommend some test using different amount of the product to determine the optimal additive amount.

6 Regulatory information*1

Item	TSCA	IECSC	ECL	TSCI
AKM-0531	✓	✓	✓*3	✓*3
AFB-1521	✓	—*2	—*4	✓*3
AAB-0851	—	—*2	—*4	✓*3
AWS-0851	—	—*2	—*5	✓*3
SC-0505K	✓	✓	✓*3	✓*3
SC-1015F	✓	—*2	—*4	✓*3
SC-0708A	—	—*2	—*4	✓*3
AKM-1511-60	—	—	✓*3	✓*3
HKM-50A	—	—	✓*3	✓*3
HKM-150A	—	—	✓*3	✓*3

*1 ✓: On list, —: Not on list. Please ask us regarding the registration status of REACH for each product.

*2 Record (Polymer of Low Concern).

If exporting to China, please contact our sales representative as exporters/importers are limited.

*3 Please contact our sales representative for declaration or registration depending on quantity.

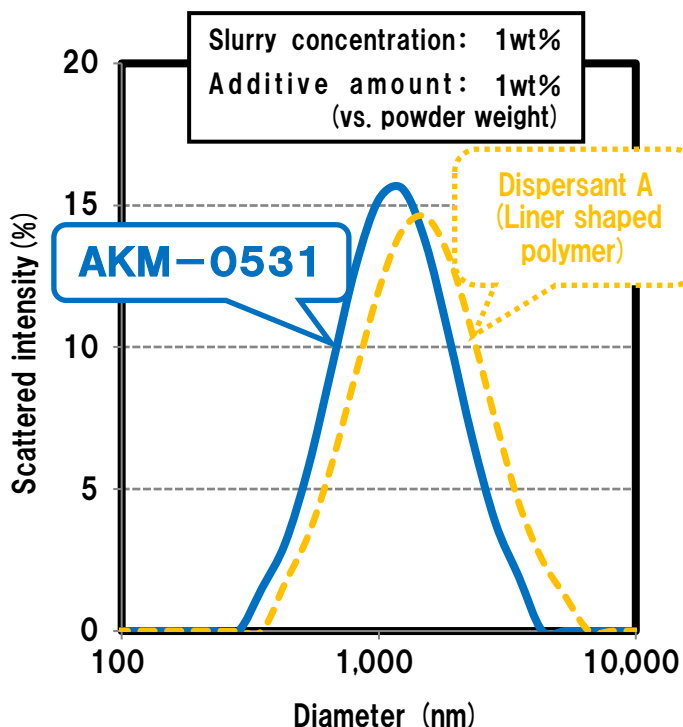
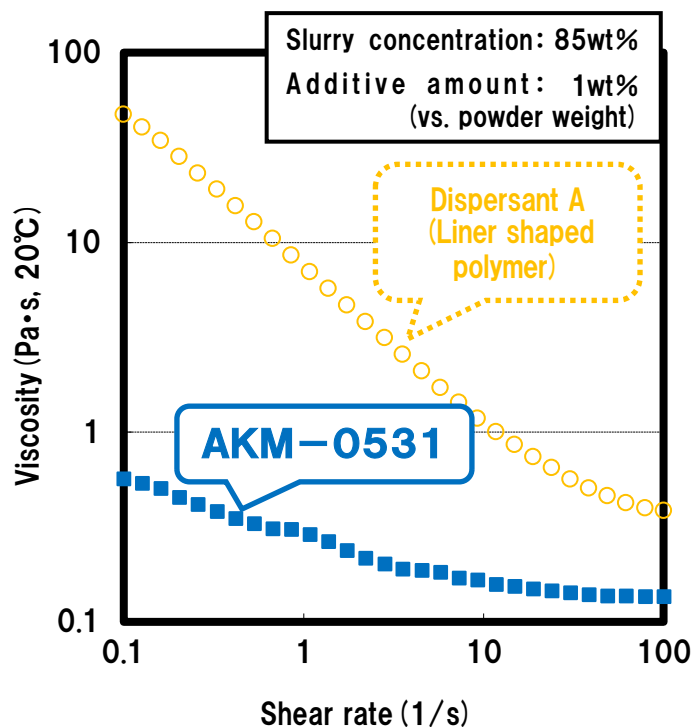
*4 Small number of complaints. If exporting to Korea, please contact our sales representative as importers are limited.

*5 Polymer of Low Concern. If exporting to Korea, please contact our sales representative as importers are limited.

7 Result of dispersing test

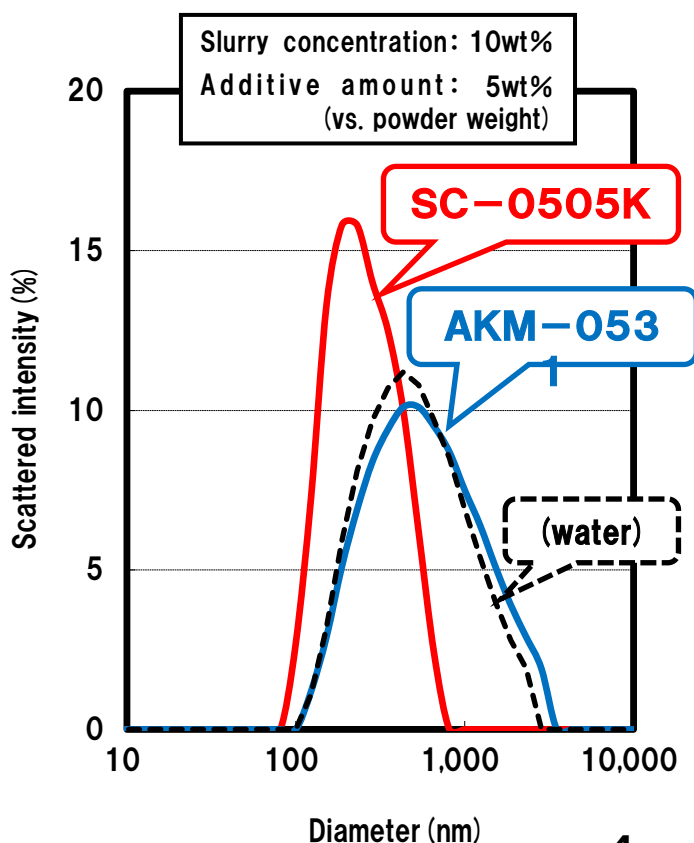
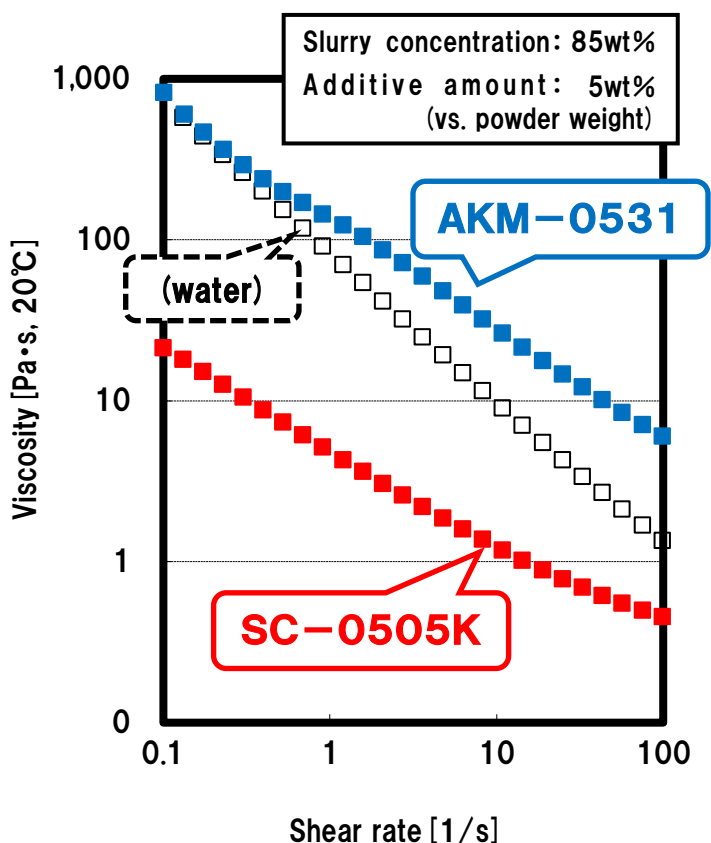
Powder : Al_2O_3 (Particle size : $1.7 \mu\text{m}$)

Solvent : Water

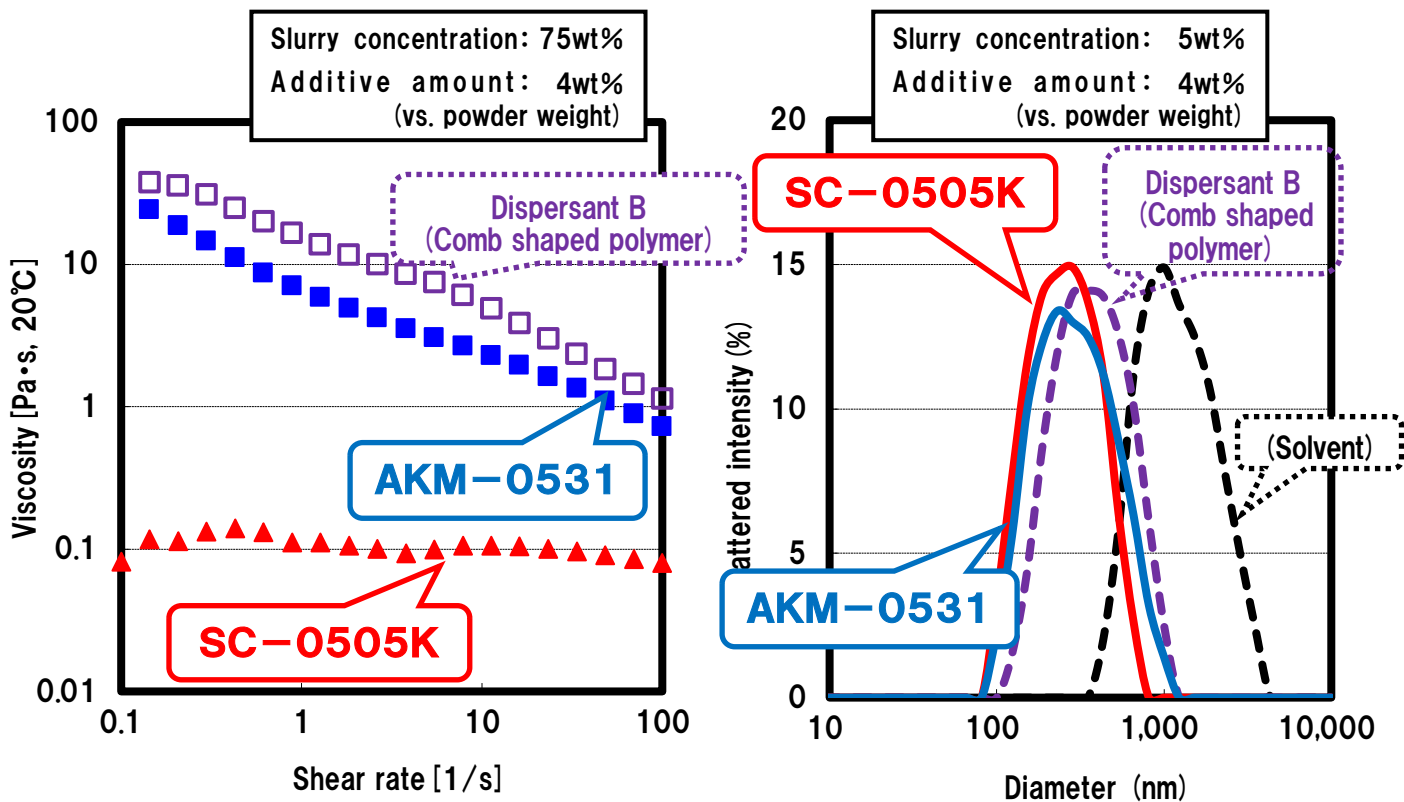


Powder : Al_2O_3 (Particle size : $0.2 \mu\text{m}$)

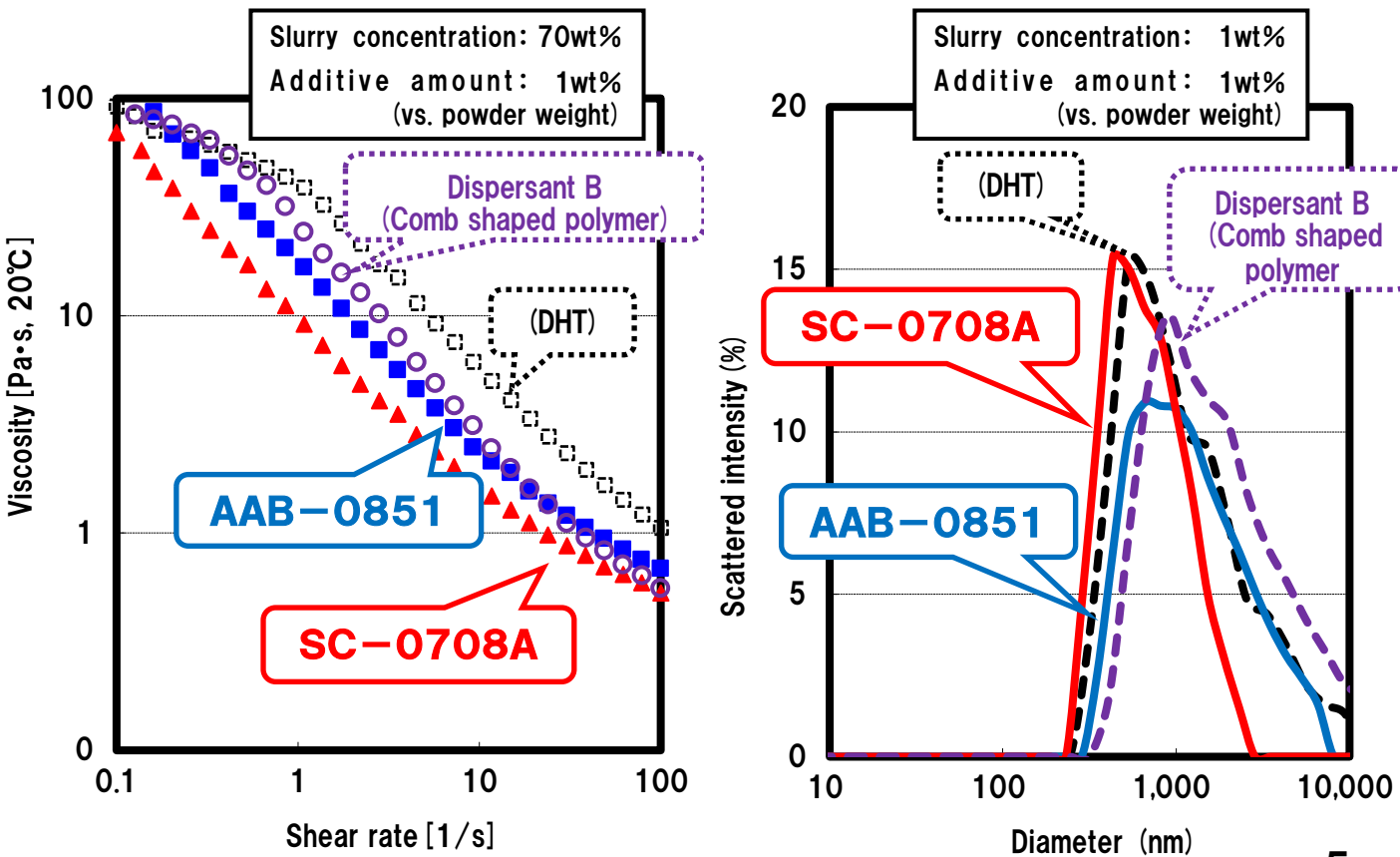
Solvent : Water



Powder : BaTiO₃ (Particle size : 0.1 μm)
Solvent : Toluene/Ethanol = 1/1 (wt)



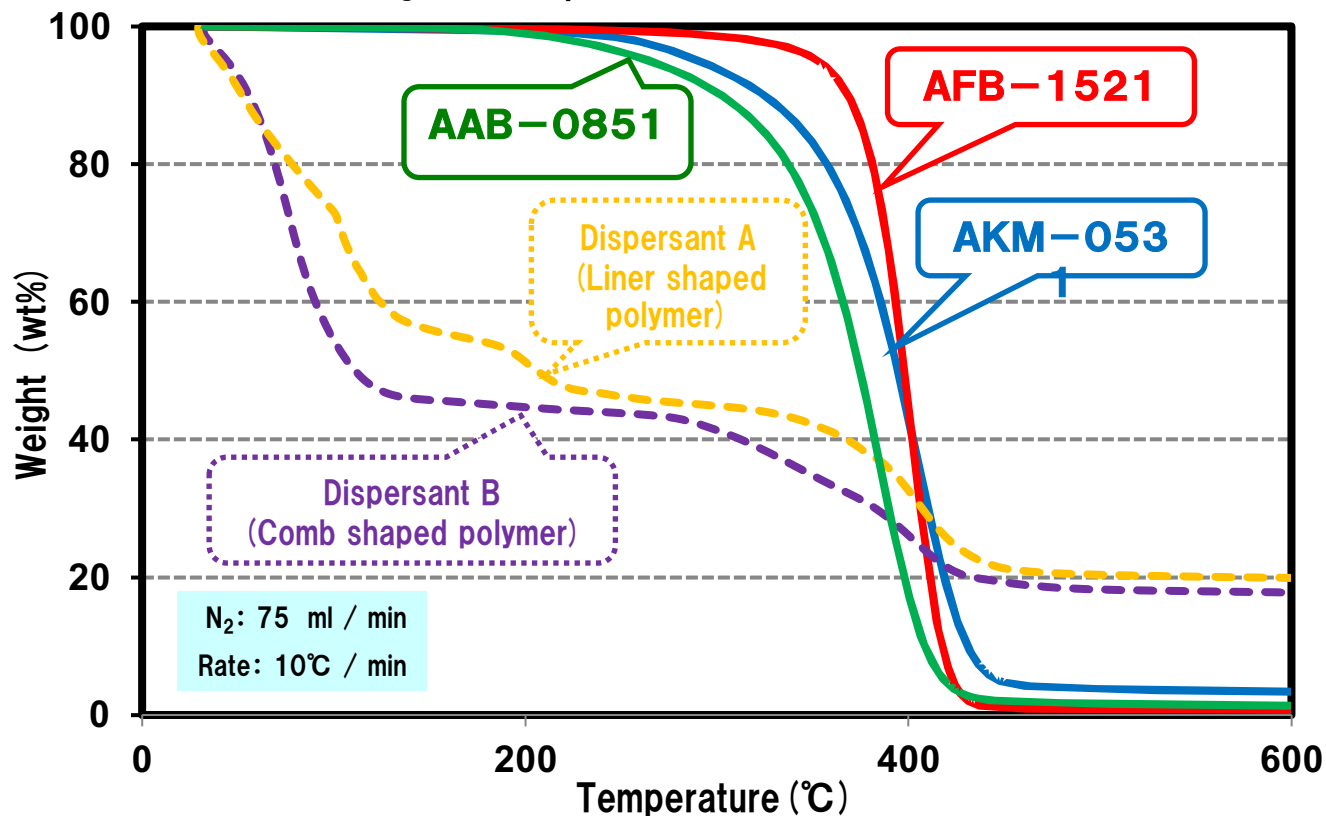
Powder : Ni (Particle size : 0.2 μm)
Solvent : Dihydroterpineol (DHT)



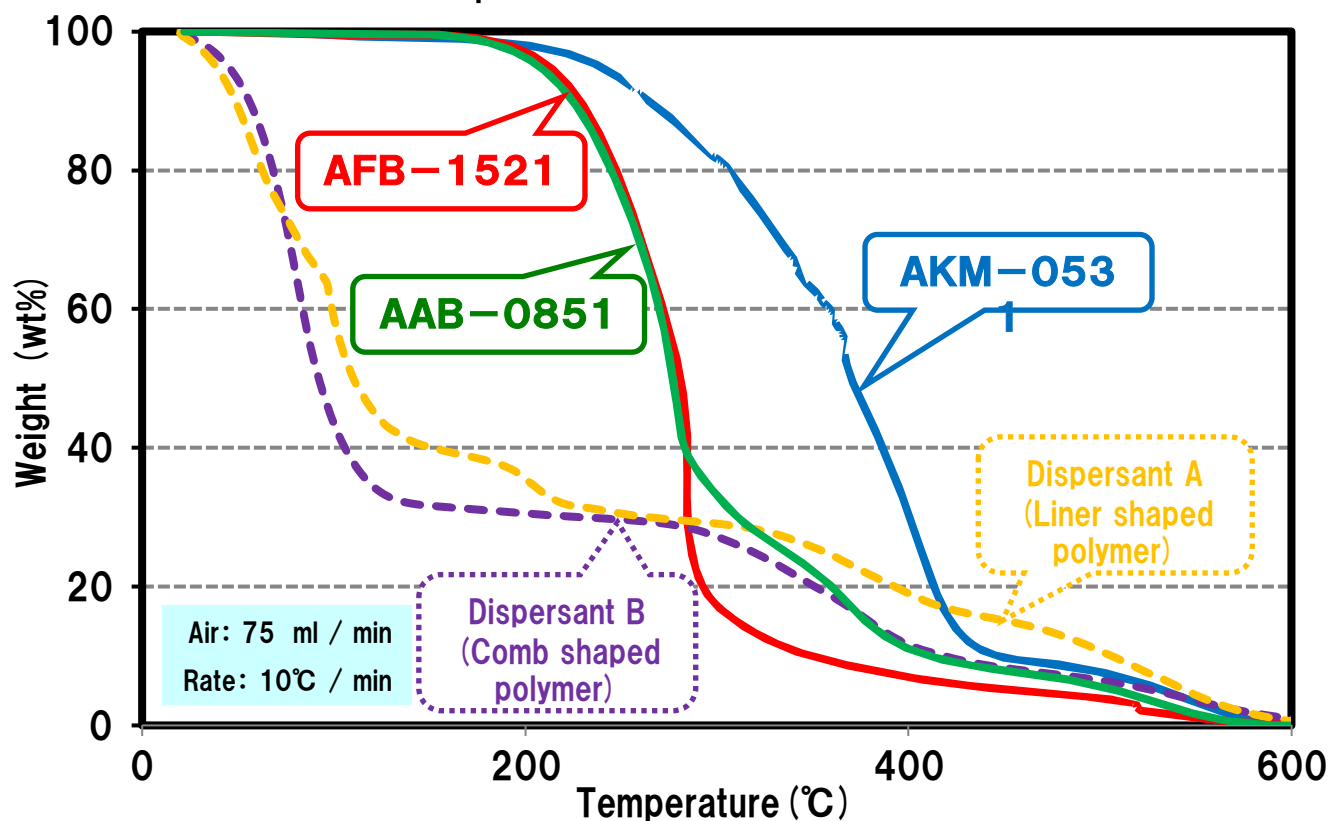
8 Thermogravimetric analysis

○MALIALIM® Series

<Under nitrogen atmosphere>

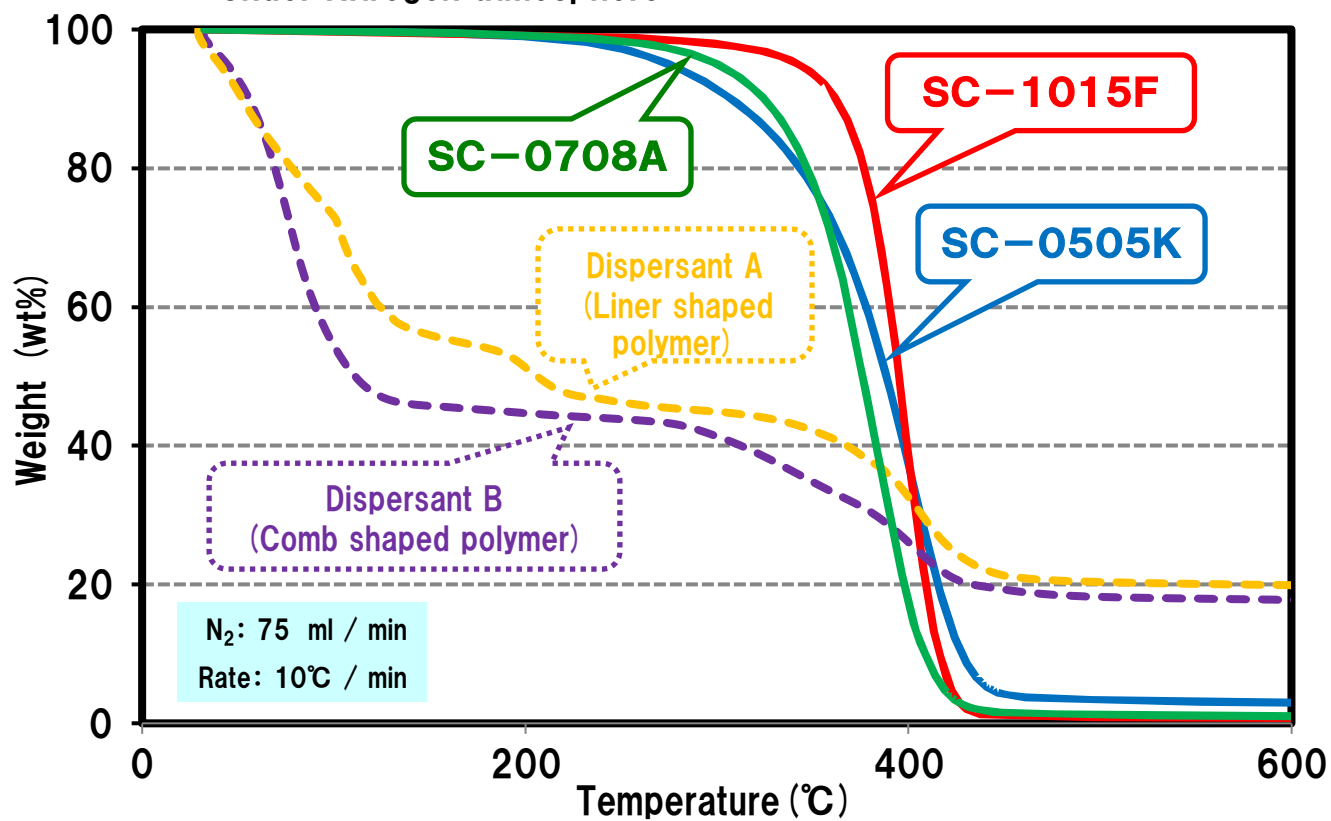


<Under air atmosphere>

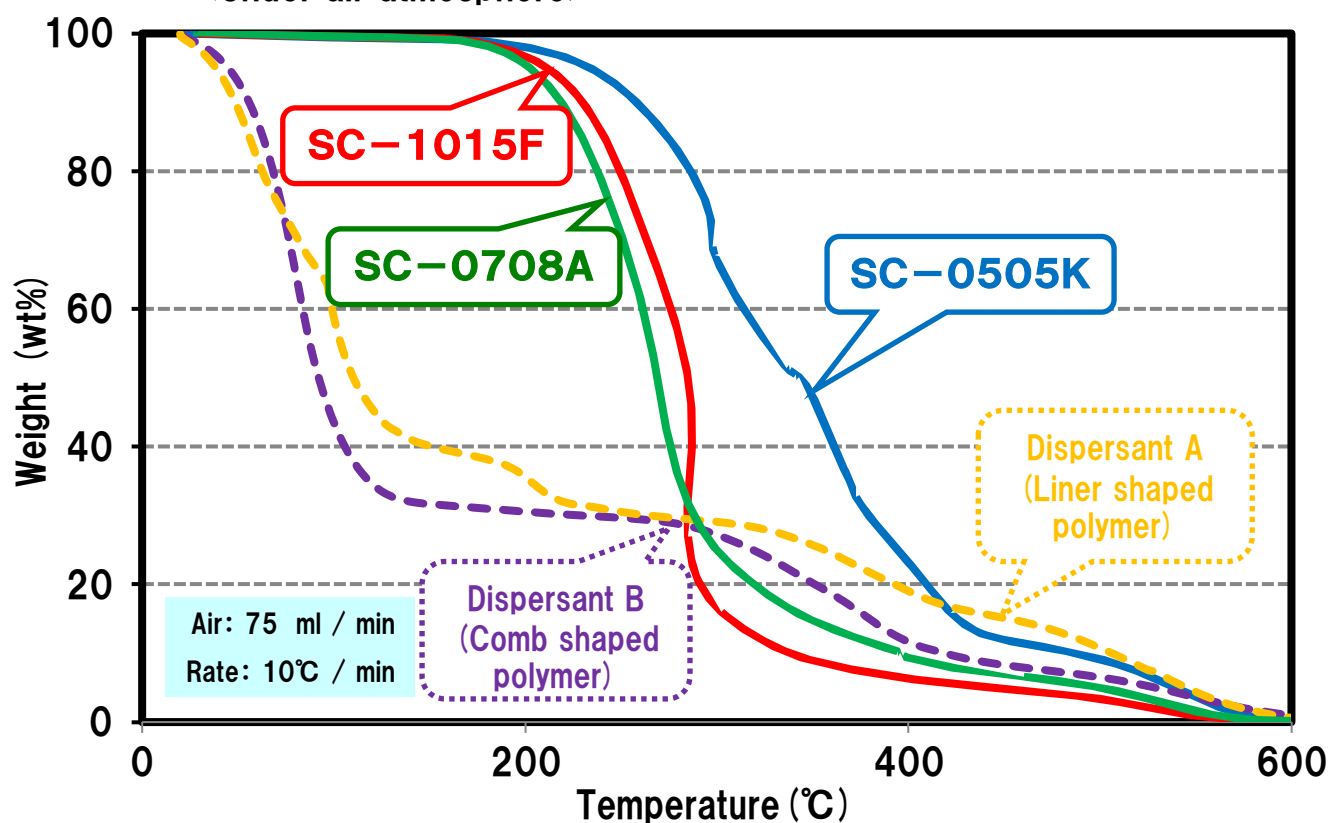


OMALIALIM® SC series

<Under Nitrogen atmosphere>



<Under air atmosphere>



9 Cautions on handling

For more detail, Safety Data Sheet (SDS) is available.

10 Other information

This catalogue is made based on our best investigation, but about data and the evaluation result of mention, is not necessarily a thing to guarantee. Because there is unknown hazardousness to all chemical substances, scrupulous attention is necessary for the handling. On the responsibility of the user members, we hope that safe terms of use are set. In addition, please use safety measures suitable for a use when you do the special handling.

Please refer to our sales representative for other any questions.

* MALIALIM is a registered trademark of NOF CORPORATION.



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