

Freund Excipients Report No.AD-0-0703

Adsorbent · Solidifier · Fluidizer

Adsolider[®]

Adsolider[®] is fine powder of silicon dioxide, produced by liquid phase method. Very pure silica sand is used as a raw material. It differs from vapor phase processed product, Adsolider[®] has richer porous and larger internal specific surface area.



《Lineup》

There are 2 types of Adsolider[®]. One is Adsolider[®]-101 as Japanese Pharmacopoeia "Light Anhydrous Silicic Acid" and the other is Adsolider[®]-102 as Japanese Pharmaceutical Excipients "Hydrated Silicon Dioxide".

Туре	Adsolider [®] -101	Adsolider [®] -102	
Compendial	Japanese Pharmacopoeia 「Light Anhydrous Silicic Acid」	Japanese Pharmaceutical Excipients 「Hydrated Silicon Dioxide」	
Mean diameter (µm)	3.2	5.0	
Loss on drying (%)	2.6	0.8	
Volume of oil adsorption (mL/100g)	310	95	
рН	7.6	3.6	
Volume test (mL/5g)	90	20	
Specific Surface area(m ² /g)	300	700	

*The above values are reference only.



《Features》



Improving fluidity

In many cases, addition of $0.1 \sim 0.5\%$ of Adsolider[®] enables to improve fluidity. The optimal adding volume depends on the property of mixed powders.



Increase tablet hardness by addition of Adsolider[®]

After adding Adsolider[®], the hardness of tablet is increased by $5 \sim 15\%$ without losing performance of disintegration.

Compression force	Add volume	Adsolider [®] -101		Adsolider [®] -102	
		Hardness(N)	Disintegration time(sec)	Hardness(N)	Disintegration time(sec)
10kN	0%	54.7	34	54.7	34
	0.4%	58.8	30	65.2	36

※ Formulation of tablet: DILACTOSE[®]S (directly compressible lactose)/ cornstarch/ Microcrystalline cellulose/ acetaminophen/ magnesium stearate



Suitable for powderization of liquid

Easy powderization by adding $Adsolider^{(R)}$ ratio of $0.5 \sim 1$ to liquid-type API of 1.



pH of Adsolider[®]-101 is 6.0~8.0 around neutrality, and less interaction with API. Adsolider[®] hardly influences acid-sensitive API.

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