

Amorphous Silica & Silicates for Powder Flow & Liquid Carrying



Keep it Flowing – free flow and liquid carrying agents

Examples of Applications

- Chilli powders
 - Cream substitutes
 - Egg powders
 - Tomato powders
 - Grated cheese
 - Salt
 - Salt substitutes
 - Carrier for flavours/
colourants
 - Carrier for feed additives
 - Carrier for essential oils
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POWDER FLOW AND ANTI-CAKING

Poor powder flow or caking in food additives, animal feed and industrial chemical sectors can add significant process time and cost, and may adversely affect final product quality. PQ's range of amorphous silicas can prevent these problems, aiding flow and guarding against caking.

LIQUID CARRYING

Precise dosing of high value liquid ingredients, such as food colourants, flavours and additives, including methionine and choline chloride, as well as highly viscous rubber compounds can be assured by carrying these on PQ's Neosyl range of products. In addition to providing improved dispersion, more economical use of ingredients is provided by accurate metering and delivery.

BENEFITS OF FREE-FLOW, ANTI-CAKING AND LIQUID CARRYING PRODUCTS

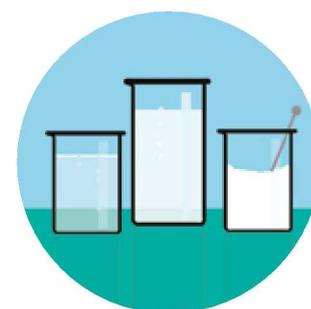
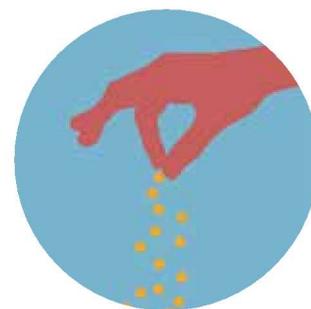
Free-flow: Process time and cost savings due to improved handling.

Anti-caking: Assured product quality through elimination of lumps and increased product shelf life.

Liquid carrying capacity: Enables high liquid volume to be carried.

Liquid carrying: Enables improved handling of high viscosity products, and controlled dosing of high value flavours/colourants.

Moisture, pressure and temperature can conspire to cause products to cake, lump, bridge and clog equipment or adversely affect product final end use, quality and shelf-life. Specifically manufactured free-flow and anti-caking agents prevent these problems and provide assured quality over the entire product shelf life.



Typical properties

GRADE	NEOSYL®					GASIL®	MICROCAL®
	AC	GP FF	GP LC	TS	TC10	23D	ET
Type	Hydrated silica	CaLcium Silicate					
Oil Absorption (g/100g)	160	250	255	245	250	290	140
Particle Size (µm)	15	18	18	12	<9	4.6	9
Tapped Density (g/l)	180	130	130	110	75	150	190
pH (5% aq)	6.5	7	7	6	6	6.5	10
Loss on Drying (%)	3.5	5	5	5	5	3	2
Loss on Ignition (%)	4	4	4	4	4	3	7
Surface area (m2/g)	180	200	200	200	200	360	60
Analysis of ignited product							
Silica (as SiO2) %	98	98	98	98	98	99	78
Calcium (as CaO) %	-	-	-	-	-	-	20
Alumina (as Al2O3) %	-	-	-	-	-	-	-
Sol salts (as Na2SO4) %	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2
Lead (as Pb) ppm	<5	<5	<5	<5	<5	<5	<5
Arsenic (as As) ppm	<2	<2	<2	<2	<2	<2	<2
Regulation							
EU Code	E551	E551	E551	E551	E551	E551	E552
US FDA CFR21	§§172.480	§§172.480	§§172.480	§§172.480	§§172.480	§§172.480	§§172.410
CAS No.	112926-00-8	112926-00-8	112926-00-8	112926-00-8	112926-00-8	112926-00-8	1344-95-2
EINECS	231-545-4	231-545-4	231-545-4	231-545-4	231-545-4	231-545-4	215-710-8

Recommendations

GRADE	NEOSYL®					GASIL®	MICROCAL®
	AC	GP FF	GP LC	TS	TC10	23D	ET
APPLICATION							
Creamer	•	•					
Spices	•	•		•	•	•	
Flavour Enhancer			•	•		•	
Salt	•	•		•			
Fertiliser		•		•			
Tomato Powder				•	•	•	
Sugar/Sweeteners	•						•
Cheese (grated)							•
Cheese (powder)		•					
Powdered Drinks	•						
Detergents		•					
Liquid Carrying (general)			•				•
Animal Feed			•				•
Dry Surfactants			•	•			
Flavour Powders		•			•	•	
CMR		•		•			
Pigments		•				•	
Pesticides		•				•	
Mortar & Ceramic pre-mixes		•		•			
Anti-foams				•	•	•	

Technical Service

PQ offers a high standard of technical and analytical service to ensure optimum performance of its products.

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