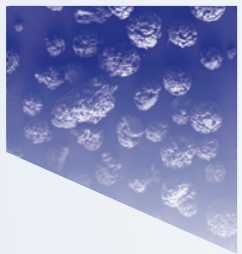
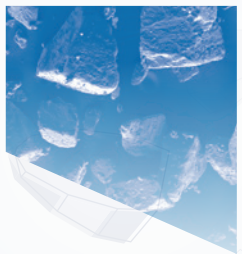
armor pharma

delivering lactose solutions





Simply tell us...

How you would like your lactose!

Product development

We offer an extensive range of pharmaceutical grade lactose, with the added ability to customize bespoke products to fulfill your exact specifications and meet formulation challenges.

- All products conform to **Ph. Eur., USP-NF, JP**
- Accurate control of batch-to-batch consistency through **on-line Malvern laser diffraction PSD analysis**
- Full traceability from raw material
- Certified animal Rennet-free raw materials
- ICH Q3D Elemental Impurities analysis results available
- Excipient Information Package available

Manufacturing facilities

Our products are manufactured in a dedicated, purpose built facility based in Brittany, France.

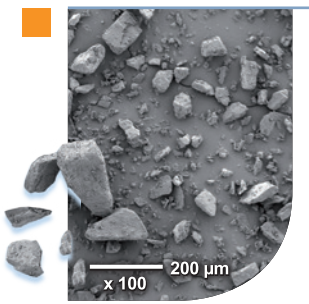
- EXCIPACT certified (GMP)
- ISO 9 001 and ISO 22 000 certified
- Following IPEC cGMP
- On-site Batch testing & Batch release

LACTOSE MONOHYDRATE

MILLED RANGE

Our range of cohesive powders, combining good compaction and blending properties. Mostly used for tablet manufacturing using wet and dry granulation technologies.

150 MESH



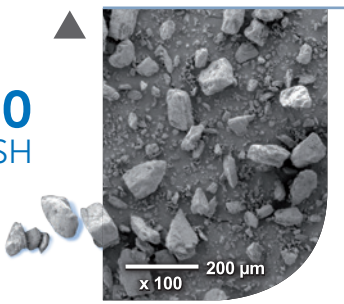
PSD (Air jet sieve)	Specifications (%)
% < 45 µm	≤ 50
% < 100 µm	≥ 70
% < 150 µm	≥ 85
% < 315 µm	≥ 97

Due to the presence of **milled** particles, this α-lactose monohydrate combines good compaction and blending properties.

x_{10} : 10 µm | x_{50} : 66 µm | x_{90} : 166 µm *

*PSD laser diffraction (Malvern, wet), indicative.

200 MESH



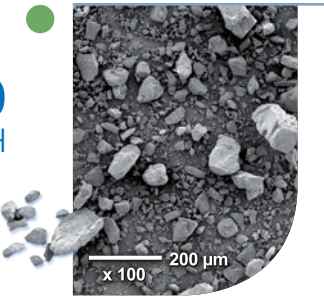
PSD (Air jet sieve)	Specifications (%)
% < 45 µm	44 - 72
% < 100 µm	85 - 97
% < 150 µm	96 - 100
% < 250 µm	98 - 100

Due to the presence of **fine milled** particles, this α-lactose monohydrate combines good compaction and blending properties.

x_{10} : 6 µm | x_{50} : 44 µm | x_{90} : 116 µm *

*PSD laser diffraction (Malvern, wet), indicative.

350 MESH



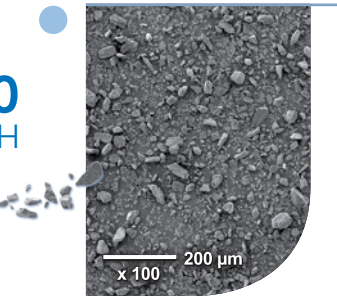
PSD (Air jet sieve)	Specifications (%)
% < 45 µm	≥ 60
% < 100 µm	≥ 96
% < 250 µm	100

Due to the presence of **fine milled** particles, this α-lactose monohydrate combines good compaction and blending properties.

x_{10} : 5 µm | x_{50} : 36 µm | x_{90} : 97 µm *

*PSD laser diffraction (Malvern, wet), indicative.

450 MESH



PSD (Air jet sieve)	Specifications (%)
% < 45 µm	≥ 90
% < 63 µm	≥ 98
% < 150 µm	100

Due to the presence of **very fine milled** particles, this α-lactose monohydrate combines good compaction and blending properties.

x_{10} : 3 µm | x_{50} : 19 µm | x_{90} : 43 µm *

*PSD laser diffraction (Malvern, wet), indicative.

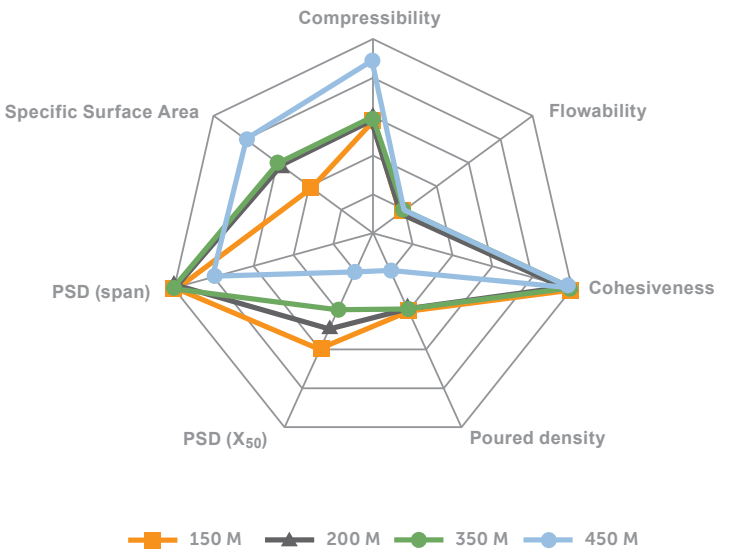
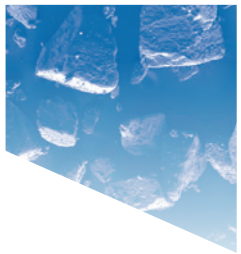


Figure legend – cf last page

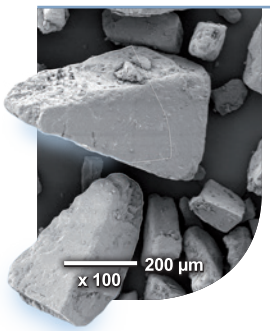


LACTOSE MONOHYDRATE

SIEVED

A range of coarse free-flowing powders of lactose with typical Tomahawk shape, very often used in capsules and sachets formulation.

80 MESH

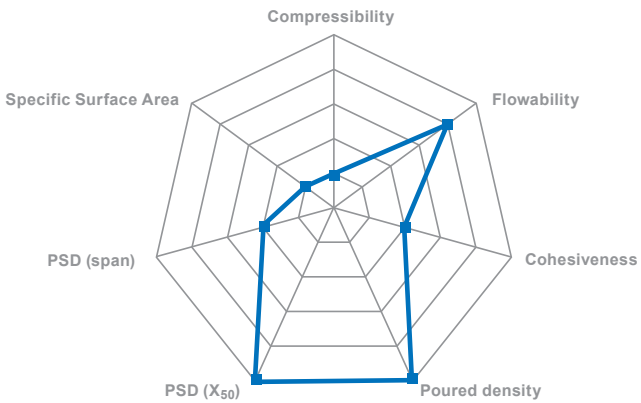


PSD (Air jet sieve)	Specifications (%)
% < 100 µm	≤ 20
% < 250 µm	70 - 98
% < 315 µm	≥ 95

Sieving process gives coarse particles with a narrow particle size distribution enabling good flowability.

x_{10} : 85 µm | x_{50} : 192 µm | x_{90} : 358 µm *

*PSD laser diffraction (Malvern, wet), indicative.



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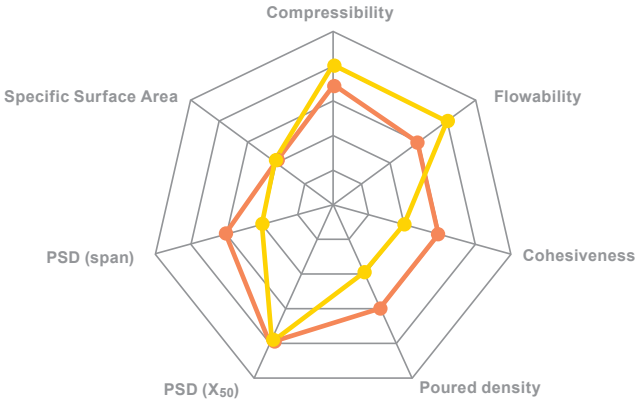


DIRECT COMPRESSION

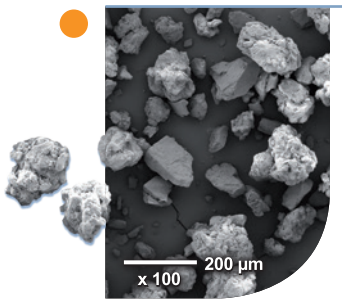
EXCIPRESS™

SD2 GR150

Figure legend – cf last page

GR150

EXCIPRESS™ GR150 is a granulated lactose typically used for Direct Compression.



PSD (Air jet sieve)	Specifications (%)
% < 75 µm	10 - 36
% < 150 µm	40 - 84
% < 355 µm	≥ 90
% < 500 µm	≥ 99

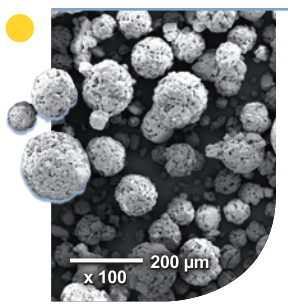
Granulated lactose consists of agglomerates of primary lactose fine particles bound in a matrix of non-amorphous lactose.

x_{10} : 54 µm | x_{50} : 149 µm | x_{90} : 313 µm *

*PSD laser diffraction (Malvern, wet), indicative.

SD2

EXCIPRESS™ SD2 is a Spray-Dried lactose typically used for Direct Compression.



PSD (Air jet sieve)	Specifications (%)
% < 45 µm	≤ 15
% < 100 µm	30 - 60
% < 250 µm	≥ 98

Spray-Dried lactose consists of fine primary lactose particles bound in a matrix of amorphous lactose. Its spherical shape combined with a narrow PSD enable the highest flowability.

x_{10} : 65 µm | x_{50} : 127 µm | x_{90} : 224 µm *

*PSD laser diffraction (Malvern, wet), indicative.

				Main Characteristics
LACTOSE MONOHYDRATE				
80 MESH	Direct Compression	• • •	• • •	Flowability
150 MESH	Wet & Dry Granulation	•	•	Compressibility
200 MESH	Wet & Dry Granulation	•	•	Compressibility
350 MESH	Wet & Dry Granulation	•	•	Compressibility
450 MESH	Wet & Dry Granulation			Compressibility
EXCIPRESS™				
GR 150	Direct Compression	• •	• •	Compressibility & Flowability
SD 2	Direct Compression	• •	• •	Compressibility & Flowability

ℹ Figures legend

	1	2	3	4	5
Compressibility	Very low	Low	Good	High	Very high
Flowability (Carr's index)	More than 26	21 to 25	16 to 20	11 to 15	0 to 10
Cohesiveness (Hausner ratio)	1,00 to 1,11	1,12 to 1,18	1,19 to 1,25	1,26 to 1,34	≥ 1,35
Poured density (g/ml)	Less than 0,50	0,50 to 0,59	0,60 to 0,69	0,70 to 0,79	≥ 0,80
X_{50}	0 to 20	21 to 50	51 to 100	101 to 200	≥ 200
Span (PSD)*	Less than 1,0	1,0 to 1,4	1,5 to 1,9	2 to 2,4	≥ 2,5
SSA (m^2/g)	≤ 0,10	0,10 to 0,40	0,41 to 0,80	0,81 to 1,40	≥ 1,41

$$*\text{Span} = \frac{(X_{90} - X_{10})}{X_{50}}$$

Any specific requirements?

Simply tell us... How you would like your lactose!

contact@armor-pharma.com

www.armor-pharma.com

Free samples available

armor pharma

delivering lactose solutions

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