

Molecular Sieve

NANOMOL

PRODUCT INFORMATION

Product name: NANOMOL

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PRODUCT DESCRIPTION

NANOMOL is a mixture of calciumoxide containing natural desiccants and natural binders. The product is designed for a static water adsorption process with very low adsorption speed. With an optimized density can reach very good water adsorption capacity in a specific volume. If not in contact with liquid water, it has no chemical reactions to aluminium, steel, galvanized steel and plastics. If used in treated spacer profiles or profiles made of other materials; relevant trials must be carried out to ensure the product's suitability. Only for insulated glass manufacturing, for different applications please contact NEDEX-UKRAINE.

TECHNICAL SPECIFICATION

Technical characteristics	calciumoxide based molecular sieve
Apperance	granule white-light grey
Density	880 g/lt \pm %5
Granule sizes	0,5 - 0,9 mm for automatic filling especially in bendable spacer
	Bars.
	1, 0 - 1, 5 mm for semi-automatic filling and manual filling
	1, 4 - 2, 0 mm for hand filling
Correct size ratio	>90 % -by weight
Ignition loss (LOI)	<3 %-by weight at 545° Celsius
% moisture	>22 (23°C, %50moisture, 30d)
Gasdesorption	at 70° Celsius for nitrogen/argon <8 ml for 40 gr molecular sieve
Delta-T Value	by 20 gr molecular sieve in 20 gr water ≥38° Celsius
Mechanical Dust	dust formation after 15min agitation <0,05%
Hardness	>4 H, for granule sizes 0.5-0.9 mm
	>10 H, for granule sizes >1, 0 mm

APPLICATION

Preliminary statement

Prior to application it is necessary to read the Safety Data Sheet for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labelling, the relevant precautions should always be observed.

Pre-treatment

Before using the Delta-T value must be measured. The volatile diagram, delivered with each party shows the initial loading of the molecular sieve approximately. If this value is higher than 2, 5%-by weight, contact Nedex-Ukraine. In case reading critical delta-T values near to the limits, the measurement of delta-T values should be repeated. In opened boxes please repeat delta-T measurement at the beginning of every working day.

All surfaces, gloves, storage boxes for molecular sieve must be clean, dry and free from grease.

Molecular sieve must be opened safely and stored in opened packages in a system where air contact is minimized. Filling into the spacers can be done by hand or by automatic machines. The storage chamber of the machines should be emptied after working hours and the content must be disposed. The opened boxes



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should be used within 48 hours, if not the residual content must be disposed. After filling process into the spacer volumes the system must be sealed within 3 hours.

The spacer internal geometry must have a smooth surface not to destroy the sieve granules. Spacers with high surface tension as plastic spacers may block filling process, check the filling weight of the sieve occasionally.

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The spacer perforation for automatic filling is very important. If the perforation is less than 4 holes/cm of spacer length, weigh the spacers before and after to control whether filling is performed correctly.

Check the section of the spacer. By warmedge spacers the section to fill the sieve may be not sufficient due to thickness of the spacer walls and geometry. Calculate the necessary molecular sieve quantity by multiplying the density of the sieve and section volume. If not sufficient fill 4 sides of IG unit, and/or order high density molecular sieve.

STORAGE

Frost-sensitive

None. Prior to processing, the product must be brought to a suitable processing temperature.

Recommended storage temperature

 0° C to $+30^{\circ}$ C. Must be protected from direct sunlight and/or thermal radiation. Storage at temperatures below 0° C and above $+30^{\circ}$ C does not cause damages to the product, but requires a control of initial moisture value.

Extreme temperatures have as a result of extreme low and high pressures in the air-tight packagings of the molecular sieves, which increases the vapour permeation through the packaging materials and sealing. **Shelf life**

12 months original closed packaging in carton boxes

12 months original closed packaging in metallic barrels.

PACKAGING

Carton boxes25 kg carton boxes, filled at 70-100°C, vacuum / no vacuumMetallic barrels150-160 kgs in cylindrical metallic barrels filled at 70-100°C, no vacuum

Hazard Indications Safety Recommendations Transport Regulations

See Safety Data Sheet