



Spheromers[®] CA for plastics

Chemical description

Spheromers[®] CA are perfectly spherical monosized beads made of cross-linked polymethyl methacrylate (PMMA).

Main use

Spheromers[®] CA can be added to a wide range of plastics and are available in 7 different particles sizes. Spheromers[®] CA are used as light diffusing agents, anti-blocking agents and can create matte films and structured plastic surfaces.

Typical values

Spheromers[®] CA6 CA10 CA15 CA20 CA30 CA40 CA60

D ₉₀ [μm]:	6	10	15	20	30	40	60
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CV [%]:	<5*
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Refractive index:	1.476-1.485
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Oil adsorption [ml/g]:	0.212
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Solubility:	inert in most solvents
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Particle density [g/cm ³]:	1.2
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Bulk density [g/cm ³]:	0.6
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Heat resistance [°C]:	260-360**
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Tg (glass transition temperature [°C]):	~130
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*CV % = (standard deviation/average bead diameter)X100

**TGA measurement: Decomposition at 360-390 °C.

Product properties

The physical and chemical behaviour of Spheromers[®] CA is the same as for PMMA in general including excellent transparency, good surface hardness, temperature resistance and UV-stability making them attractive as functional additives in plastics. The combination of chemical composition and perfect spherical shape ensure tough beads that remain unchanged during normal processing conditions.

Applications

The perfectly spherical PMMA beads have extremely narrow particle size distribution that ensures homogeneous and reproducible properties in light diffusing applications.

The light diffusion effect is determined by the difference in refractive index between plastic matrix and polymer particles, the particle diameter and loading level of particles. Spheromers[®] CA PMMA beads will be effective in engineering plastics including polycarbonate, polystyrene, PET/PETG, ABS and SAN.

Storage and handling

Storage stability is at least 5 years from the date of production when stored dry at temperatures below 25 °C in closed containers. Please close the innerliner of open boxes to avoid moisture pick-up and contamination.

Packaging

Products are available in a 25 kg cardboard box with polyethylene innerliner and 450 kg (18 boxes) on each pallet.

Material safety

Please consult the Safety Data Sheet

Regulatory information

Please contact us for details.

polymerbeads.lamberti.com

This information and our technical recommendations, if any, both verbal and in writing, are given to the best of our knowledge, without any express or implied warranty, e.g., regarding their fitness for a specific purpose. Each user of our products is the sole responsible for assessing and ensuring compliance with all legal regulations including intellectual property laws and necessary certifications and authorizations with respect to the use, combination and processing of our products. Our technical recommendations do not release the user from the obligation to check its validity and to test our products as to their suitability and fitness for the intended processes and uses. The application, use and processing of both our products and the products manufactured by the user (on the basis of our technical recommendations, if any) are beyond our control and, therefore, the user is the sole responsible for them. Detailed information and instructions on handling the products and cautions to be observed in the use of them are available in our relevant Safety Data Sheet.