

MICROMASS

CODE: 212-124A

Micromass is a material with highly unusual properties based on a very simple makeup: micron-size glass bubbles clumped together with a bonding agent that creates meniscus-shaped bridges between bubbles. The glass bubbles are microspheres with rigid walls - as opposed to many others made from soft materials such as polymers. Polymer microspheres are frequently used as a carrier to contain (and thus protect) other materials such as Mindsets' thermochromic pigment. Another example - Mindset's 'Expansel' - contains a gassing agent; when this is heated, its microsphere walls soften, the gas expands and the overall volume of the material grows.



Glass microspheres are commonly used as an additive in resins, plaster and even concrete. The net effect is to provide a mechanism for introducing microscopic air bubbles and thus reduce density. Micromass can be mixed into practically any polymer-based or water-based material and actual applications range from the manufacture of low-density adhesives in model aircraft to floatable polymers in marine applications. The uses for micromass are many and varied, but include :

1. *inspiring discussions and science investigations*
2. *use as a 3D concept modelling medium*
3. *use as a simulation medium - representing deformation, movement and fractures in solids and semi-solid masses*
4. *mould making - e.g., for taking an impression of fine surface details and casting plaster*
5. *modifying the density of other materials*
6. *thermal insulation*
7. *acoustic insulation*
8. *use in investigating static charges*
9. *impact absorbance such as mechanical shocks and vibrations*
10. *abrasive - under pressure a proportion of the microspheres fracture and create an effective abrasive*

Instant demonstration: Fill a small syringe with Micromass, compact it with the plunger and then blow from the opposite end to eject a perfect cylinder. If you find a novel use for micromass, Mindsets will be very pleased to hear from you. Please contact us at the address below.



Supplied by: Mindsets (UK) Limited, Unit 10, The IO Centre, Lea Road, Waltham Cross, Herts, EN9 1AS
Tel: 01992 716052 Fax: 01992 719474 www.mindsetsonline.co.uk