

GLASS BUBBLES

WHITE WATERPROOF FILLING & BONDING

- Hollow glass spheres
- Physically harder and more difficult to sand
- Water-proof or lowest-cost filler for general applications
- Hard surface finish filler for hard wearing edges and surfaces
- Low strength bonding of softwood
- White in colour

INTRODUCTION

Glass Bubbles are hollow glass spheres with a more variable particle size than microballoons. Being composed chemically of glass, they are physically harder than microballoons and filled resin mixes are noticeably more difficult to sand.

However, glass bubbles produce a more waterproof filler mix and are often used on below-waterline applications on boats. Being significantly less expensive than microballoons they are often preferred if easy sanding performance is not of prime importance. They can be mixed with microballoons in any proportion for colour purposes

Hollow spheres

Increase the volume and reduce the density of any resin system and are used to make adhesive mixes and filling & fairing mixes.

- Microballoons: Brown microsphere filler powder used to make glues or paste fillers
- Glass Bubbles: White microsphere filler powder used to make glues or paste fillers

Short Fibres

For adding strength to a resin and hardener mix used as a structural adhesive, short reinforcing fibres are often added which act in a similar strengthening way to the long reinforcing fibres used in composite construction.

- Microfibres: Cellulose fibres used to make adhesive mixes

Flow Modifiers

The most common material for modifying the flow properties of a resin mix is colloidal silica. This is a very fine powder which is added in conjunction with other fillers to 'thicken' mixes and reduce their flow on vertical surfaces (increase thixotropy).

- Colloidal Silica: Fine, anti-sag, filler powder. Use in combination with other filler powders



PRODUCT INFORMATION

AVAILABILITY

The product is available in a number of formats as shown in the table below. Please contact your local customer support representative for more information.

FILLER TYPE	500ml / 90G	1 - 2 LITRES / 300G	30 LITRES / 5KG	NOTE
Glass Bubbles	A230-005	A230-001	A230-003	All quantities are approximate due to the low density nature of the fillers.

PRODUCT DETAILS

Composition:	'C' Class
Appearance:	White Powder
Particle Size:	40 - 80 microns
Particle Density:	200g/litre approx.
Bulk Density:	100 - 150g/litre approx.

TRANSPORT & STORAGE

The product should be kept in securely closed containers during transport and storage. Adequate long term storage conditions will result in a shelf life of 2 years from the date of manufacture. Storage should be in a warm dry place out and containers should be firmly closed.

COMPONENT	UNITS	
Glass Bubbles	months	24

INSTRUCTIONS FOR USE

Below are approximate filler loadings for making adhesive and filler mixes together with AMPRO™ multi-purpose systems. For further information please refer to the respective AMPRO™ datasheet.

FILLING AND FAIRING MIXES

All filler additions are approximate and can be adjusted by the user to achieve the desired consistency.

DESCRIPTION	FILLER TYPE	EASE OF SANDING	WATER RESISTANCE	FILLER QUANTITY*		AMPRO SILICA ADDITION*		APPROX. DENSITY	APPROX. VOLUME
				%	FOR 1KG	%	FOR 1KG		
Brown, Low Density	Microballons	Easy	Moderate	25 - 30	250 - 300 g	2 - 3	20 - 30	0.6 g/cm ³	2.2 Litres
White, Low Density	Glass Bubbles	Moderate	High	35 - 40	350 - 400 g	3 - 5	30 - 50	0.5 g/cm ³	3.0 Litres

*calculated by weight relative to the mixed system of resin and hardener

ADHESIVE MIXES

All filler additions are approximate and can be adjusted by the user to achieve the desired consistency.

DESCRIPTION	FILLER TYPE	FILLER QUANTITY*		AMPRO SILICA ADDITION*		APPROX. DENSITY	APPROX. VOLUME
		%	FOR 1KG	%	FOR 1KG		
Brown, Low Density	Microballons**	15 - 20	150 - 200 g	3 - 5	30 - 50 g	0.7 g/cm ³	1.8 Litres
White, Low Density	Glass Bubbles**	15 - 20	150 - 200 g	4 - 6	40 - 60 g	0.6 g/cm ³	2.0 Litres
Opaque, High Strength	Microfibres	7 - 10	70 - 100 g	2 - 4	20 - 40 g	0.9 g/cm ³	1.0 Litres

*calculated by weight relative to the mixed system of resin and hardener

**Microfibres are always preferred for load-carrying adhesive joints

HEALTH AND SAFETY

The following points must be considered:

- Skin contact must be avoided by wearing protective gloves. Gurit recommends the use of disposable nitrile gloves for most applications. The use of barrier creams is not recommended, but to preserve skin condition a moisturising cream should be used after washing.
- Protective clothing should be worn when mixing, laminating or sanding. Contaminated work clothes should be thoroughly cleaned before re-use.
- Eye protection should be worn if there is a risk of resin, hardener, solvent or dust entering the eyes. If this occurs flush the eye with water for 15 minutes, holding the eyelid open, and seek medical attention.
- Ensure adequate ventilation in work areas. Respiratory protection should be worn if there is insufficient ventilation. Solvent vapours should not be inhaled as they can cause dizziness, headaches, loss of consciousness and can have long term health effects.
- If the skin becomes contaminated, then the area must be immediately cleansed. The use of resin-removing cleansers is recommended. To finish, wash with soap and warm water. The use of solvents on the skin to remove resins etc must be avoided.

Washing should be part of routine practice:

 - ↪ before eating or drinking
 - ↪ before smoking & vaping
 - ↪ before using the lavatory
 - ↪ after finishing work
- The inhalation of sanding dust should be avoided and if it settles on the skin then it should be washed off. After more extensive sanding operations a shower/bath and hair wash is advised.

APPLICABLE RISK & SAFETY PHRASES

Gurit produces a separate full Safety Data Sheet for all hazardous products. Please ensure that you have the correct SDS to hand for the materials you are using before commencing work.

NOTICE

All advice, instruction or recommendation is given in good faith but the selling Gurit entity (the Company) only warrants that advice in writing is given with reasonable skill and care. No further duty or responsibility is accepted by the Company. All advice is given subject to the terms and conditions of sale (the Conditions) which are available on request from the Company or may be viewed at Gurit's Website: www.gurit.com/terms-and-conditions.aspx

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The Company reserves the right to change specifications and prices without notice and Customers should satisfy themselves that information relied on by the Customer is that which is currently published by the Company on its website. Any queries may be addressed to the Technical Services Department.

Gurit is continuously reviewing and updating literature. Please ensure that you have the current version by contacting your sales contact and quoting the revision number in the bottom left-hand corner of this page.

TECHNICAL CONTACT INFORMATION

For all other enquiries such as technical queries:

Telephone + 44 1983 828000 (08:30 – 17:00 GMT)
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24-HOUR CHEMICAL EMERGENCY NUMBER

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