



www.lime.org.uk

Tŷ-Mawr

ecological building products
deunyddiau adeiladu ecolegol

product range



Courtesy: D.Morgan

glaster®



...breathing life into buildings...

Alarmed by the **environmental effects of large scale sand extraction**, we at Tŷ-Mawr decided to improve the environmental credentials of our traditional lime mortars, plasters and renders by identifying more **sustainable aggregates**.

One of the results is "**glaster®**", a range of products in which various colours and grades of crushed, recycled glass is used instead of virgin sand.

These innovative materials provide all of the benefits of traditional lime-based products but with a contemporary 'twist'. The resulting product range appeals to the **environmentally-minded** as well as those looking for a **distinctive aesthetic**.

why waste?

"It's disgraceful that less than 20% of our rubbish is recycled or composted in the UK. The UK glass recycling rate is among the lowest in Europe. But 30 gallons of oil are saved for every tonne of glass which is recycled". FRIENDS OF THE EARTH

Caring for buildings...Caring for the environment...Caring for health...

Gofalu am adeiladau...Gofalu am yr amgylchedd...Gofalu am iechyd...



www.russelljones.org.uk
www.touchbasedesign.co.uk

glaster® plaster/render - winner Grand Designs Eco-house 2006



Henry with recycled glass aggregate - the same consistency and grading as sand.



Courtesy : B.Sargent

Pargetted Peacock in glaster®

glaster® is a blend of **British lime (binder)** and **recycled glass (aggregate)**, to make plasters, renders and mortars which are suitable for **old buildings, ecological new builds** or for those wanting to add **a surface finish with a difference.**

why lime?

- > has been successfully **used** in building for over **4000 years.**
- > helps to **control condensation and damp**, thus creating a **healthier building.**
- > enables **other sustainable building materials to be used** such as wood, straw, woodfibre boards, clay and earth.
- > can be **recycled at the end of its useful life** and will allow **other building components** to potentially be **reclaimed and reused.**
- > is **less damaging** to the environment compared to its modern counterparts.

why recycled glass?

- > reduces the level of **virgin sand extraction.**
- > develops a market for a **waste product.**

why glaster®?

- > **technically excellent** with some performance advantages over sand.
- > **hand or spray application.**
- > building and occupant **health benefits.**
- > produces a **beautiful, unique aesthetic**, (which can be varied by combining different colours of glass with natural pigments added to the lime).

where?

- > most conventional backgrounds - **stone, brick, block and wood wool boards.**
- > as a mortar for **building or pointing up stonework, brickwork or blocks.**
- > **externally** as a **render** with a **flat or roughcast** finish.
- > **internally** as a **plaster** which can be **painted, trowelled** to a smooth finish or **etched** to reveal more glass.



Courtesy: Austin Smith Lord Architects, A.J.Philip Plastering

glaster® plaster - Shrewsbury Theatre, Shropshire.

availability

glaster® products are available in two premixed ranges:

- > **traditional 'ready-to-use' wet premix** – manufactured using **traditional fat lime putty** and **recycled crushed glass.** This product range is ideal for **plastering internally** or **repairing old buildings** where it is important to maintain **the flexibility and vapour permeability of the building.** It is ready-to-use and simply requires mixing, prior to application.
- > **dry hydraulic premix** – manufactured using a **moderately hydraulic lime** and **recycled glass** which is suitable in most 'usual' conditions e.g. for stone, brick or block work as a render, plaster or mortar. This range is supplied as a **dry premix** to which water must be added on-site and then mixed in a mill/site mixer. Silos are also now available. Please call to discuss your requirements.

The raw materials comply with:

Glass Aggregate	BS EN 13139 2002
Natural Hydraulic Lime	BS EN 459 PART1 2001
Quick Lime	BS EN 459 PART 1 2001

glaster® is manufactured by Tŷ-Mawr in Wales in a facility whose quality management system is certified as meeting the requirements of ISO9001:2008

Tŷ-Mawr Lime Tel: 01874 611350 www.lime.org.uk

Specialist Manufacturer and Distributor of Traditional and Ecological Building Materials and Paints

ers...renders... roughcasts...

glaster® plaster/render

glaster® plaster is suitable for **internal plastering** as well as **external rendering**. It is available in a **'self-coloured' range** – see below – which can be trowelled smooth or etched to reveal more of the glass aggregate. Alternatively, it can be painted with a breathable paint – see www.lime.org.uk for appropriate paints.

We are also able to **'tailor-mix'** a specific colour for you – please contact us to discuss your requirements.

self-coloured range



Whilst every effort is made to ensure the accuracy of colour, due to the limitations in the print process, variations will occur. Please ask for an actual sample before specifying a colour.

glaster® external roughcast

Using a coarser grade of crushed glass and by **spray applying** the product – a unique render finish can quickly be applied to blockwork, masonry, brick and building boards. The increased surface area of such a finish helps the evaporation of moisture, it is therefore an extremely **effective finish** for very **exposed elevations**.



External Roughcast glaster®

glaster® plaster/render	Approximate Coverage
1 tonne of wet premix	54sqm per 6mm coat
25kg bag / 20 litre bucket wet premix	1.3sqm per 6mm coat
1 tonne dry premix	67sqm per 6mm coat
20 litre bucket dry premix	1.7sqm per 6mm coat



Internal glaster® plaster being applied to Ty-Mawr wood wool boards.



Self coloured glaster® (brick pink)

glaster® plaster product selection

Building Material*	Site Type	Suggested Base Coats	Suggested Build-up	Suggested Top Coat - please note the top coat should be softer and thinner than previous coats	Suggested Build-up
Cob, Rammed Earth, Strawbale ^o (haired base coats)	Internal	glaster® Fat Lime (haired) Plaster or glaster® Dry Hydraulic Lime Plaster	2 x 9mm 2 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 6mm [•]
	External	glaster® Dry Hydraulic Lime Plaster	2 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 6mm
Reed Mat, Reed Board (haired base coats)	Internal	glaster® Fat Lime (haired) Plaster or glaster® Dry Hydraulic Lime Plaster	2 x 9mm 2 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 6mm [•]
	External	n/a		n/a	
Celenit Wood Wool Boards (mesh base coat)	Internal	glaster® Fat Lime (unhaired) Plaster or glaster® Dry Hydraulic Lime Plaster	1 x 9mm 1 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 9mm [•]
	External	glaster® Dry Hydraulic Lime Plaster	1 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 9mm
Woodfibre Board (mesh base coat)	Internal	glaster® Fat Lime (unhaired) Plaster or glaster® Dry Hydraulic Lime Plaster	1 x 9mm 1 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 9mm [•]
	External	glaster® Dry Hydraulic Lime Plaster	1 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 9mm
Lath (internal only), Soft Stone	Internal	glaster® Fat Lime (haired) Plaster	2 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 6mm [•]
	External	glaster® Fat Lime (haired) Plaster or glaster® Dry Hydraulic Lime Plaster	2 x 9mm 2 x 9mm	glaster® Fat Lime (unhaired) Plaster or glaster® Dry Hydraulic Lime Plaster	1 x 6mm 1 x 6mm
Soft Brick (mesh base coat)	Internal	glaster® Fat Lime (unhaired) Plaster or glaster® Dry Hydraulic Lime Plaster	2 x 9mm 2 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 6mm [•]
	External	glaster® Fat Lime (unhaired) Plaster or glaster® Dry Hydraulic Lime Plaster	2 x 9mm 2 x 9mm	glaster® Fat Lime (unhaired) Plaster or glaster® Dry Hydraulic Lime Plaster	1 x 6mm 1 x 6mm
Hard Stone (haired base coats)	Internal	glaster® Dry Hydraulic Lime Plaster	2 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 6mm [•]
	External	glaster® Dry Hydraulic Lime Plaster	2 x 9mm	glaster® Fat Lime (unhaired) Plaster	1 x 6mm
Hard Engineering Brick, Concrete Blocks (mesh base coat)	Internal	glaster® Dry Hydraulic Lime Plaster	2 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 6mm [•]
	External	glaster® Dry Hydraulic Lime Plaster	2 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 6mm
Insulation Blocks* (haired base coat)	Internal	glaster® Dry Hydraulic Lime Plaster	1 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 9mm [•]
	External	glaster® Dry Hydraulic Lime Plaster	1 x 9mm	glaster® Dry Hydraulic Lime Plaster	1 x 9mm

Dub out uneven surfaces prior to applying first coat. ^oMay require more coats due to waviness of bales. ^{}Insulation blocks have very high suction, be careful to control suction. Available in a coloured range and with different coloured glass, when available. **•or for a fine finish add Fat Lime Internal Top Coat Plaster, 1 x 3mm coat**

...screeds and mortars.



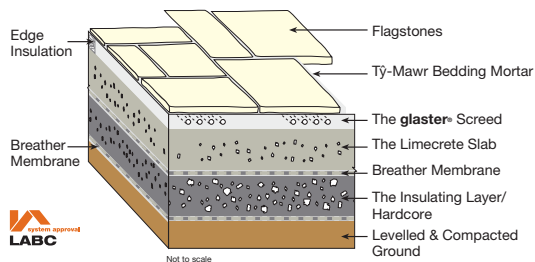
glaster® screed was chosen by the National Museum and Galleries of Wales for their under floor heating carrier before laying the flagstones on their insulated limecrete floor in the 13th Century Church at St Fagan's.



A heating pipe in the **glaster®** screed

glaster® screed

This product is perfect for use with our **insulated limecrete floors**, compatible with underfloor heating onto which flagstones, timber floors (ventilated) or unsealed tiles can be laid.



Cross section of limecrete floor see www.lime.org.uk for further information.

glaster® screed **Approximate Coverage @ 50mm**

1 tonne dry premix	7sqm
20 litre bucket dry premix	0.2sqm

table of typical compressive strengths

TYPE OF glaster®	TYPICAL COMPRESSIVE STRENGTH (N/mm ²) (tested @ 90 days)
Traditional Fat Lime	1.16
NHL2	1.87
NHL3.5	2.55
NHL5	4.04

Self-coloured **glaster®** render (cream)



Courtesy: M.Rosenthal, L.Berry

glaster® mortar

This mortar is ideal for **building or pointing blockwork, masonry and brick**. It is available as a dry premixed to which water must be carefully gauged on site. See table opposite for compressive strengths.

glaster® mortar **Approximate Coverage**

1 tonne of wet premix	Pointing 40sqm (stone) 100sqm (brick)
25kg bag / 20 litre bucket wet premix	Building 4sqm (stone @ 450mm thick) Building 900 bricks
1 tonne dry premix	Pointing 50sqm (stone) 100sqm (brick)
20 litre bucket dry premix	Building 4.2sqm (stone @ 450mm thick) Building 1125 bricks
20 litre bucket dry premix	Pointing 1.25sqm (stone) 2.75sqm (brick)



Courtesy: Marchini Curran Associates & Softroom, duBoulay Contracts
Wahaca Mexican Restaurant, London

product support

Please call us if you would like further information or assistance with a proposed project. We are able to offer production of samples, assistance with calculating quantities, application guides, NBS specification clauses, a list of contractors and can arrange for training (onsite or at our training premises at Tÿ-Mawr) if required.

n55Plus



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Distribution warehouse: Unit 12, Brecon Enterprise Park, Brecon, Powys LD3 8BT
Tel: 01874 611350 Fax: 01874 658502 email tymawr@lime.org.uk www.lime.org.uk

For further information on any product or system in this leaflet or to keep up with developments at Tÿ-Mawr, please visit our website www.lime.org.uk and register for regular updates!

Disclaimer - every effort has been made to ensure the accuracy of the information and diagrams in this leaflet, however Tÿ-Mawr can not be held responsible for any direct or indirect loss or damage caused by any inaccuracies. Please call us to check information before ordering.

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