

PRODUCT DATA SHEET	May 2015
DECOLIGHT	

- **Trade name:** Stucchitalia Decolight®
- **Common names:** Decolight
- **Manufacturer:** **Stucchitalia International LLC**  
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New Castle – Delaware, U.S.A.  
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## Summary

Stucchitalia Decolight® is a chemical gypsum with resinous polymers. It was the first commercially viable and technically researched chemistry that when combined with certain alpha-hemihydrate gypsum resulted in a matrix suitable for interior or exterior applications thanks to addition of Fluid Decolight. The Stucchitalia® Decolight® system can be used in all production techniques – spray-up hand lay-up and premix – to fabricate lightweight, high strength parts with a wide variety of surface finishes. These features, plus the quick demolding times normally associated with gypsum products, make this system ideal for the architectural ornamentation, casting or decorative arts markets. In addition, it is a non-toxic, water-based material with a neutral to acid PH. No hazardous materials are used in the manufacturing process and no hazardous waste products are generated.

## Features of Stucchitalia® Decolight®

Stucchitalia® Decolight® is a lightweight composite with a density of 95 to 100 pcf / 1602 k/m<sup>3</sup>.

Architectural parts typically have a composite thickness of 15 mm., including the face mix.

Stucchitalia® Decolight® is an inert material, and depending on the production method used, contains from 5 to 15% glass fiber reinforcement which gives the composite high flexural, tensile and impact strengths.

Parts can be produced with a smooth or textured surface in a natural white or a range of integrally pigmented colors.

Stucchitalia® Decolight® castings can also have integrally pigmented and aggregate filled face mixes which when sand blasted or wet polished, give the look and feel of natural stone. Castings produced with an as demolded surface provide an ideal substrate to receive a wide range of applied surface coatings.

Commercially available coating systems are suitable for spray, brush or roller application.

Metal powders can be added to the mix and brushed or slush cast into the mold. When the casting is demolded, the piece can have patinas and/or polished to achieve “metal like” looks.

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### Classifications and Approvals

Stucchitalia® Decolight® is classified as "A1" in accordance with the European Standard EN 13501-1. This standard provides the reaction to fire classification procedures for all construction products, including products incorporated within building elements. A1 is the highest classification possible.

Stucchitalia® Decolight® is approved for use on cruise ships and marine applications with Module "B" and "F" Certificates of Approval in accordance with the International Maritime Organization (IMO) and Marine Equipment Directive (MED) regulations.

### Samples Available

Stucchitalia® is able to custom fabricate Decolight® in a number of textures or patterns, and some may be available pre-finished. Please contact your local sales representative to learn more or discuss custom requirements for a specific project.

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## TECHNICAL INFORMATION

### PRODUCT DESCRIPTION

Decolight® is a formulated hemihydrate plaster ( $\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$ ) and resin produced from naturally occurring high purity gypsum mineral. It is off-white in colour. It is used for the production of fine detailed and high strength giftware and models.

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### PLASTER TO WATER RATIO

Plaster to Water Ratio (by weight)	4.76:1
Water to plaster ratio (by weight)	21%
Plaster to water mix ratio (by weight)	100/21

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### CHEMICAL PROPERTIES

Chemical Name	Decolight
Chemical Composition	$\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$
Colour	White
Colorometer L* value	92
Colorometer a* value	0.4
Colorometer b* value	3.5

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### SETTING PARAMETERS

Initial setting time (minutes)	25
Final setting time (minutes)	28
Linear Expansion (%)	0.12

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### MECHANICAL PROPERTIES

Brinell Hardness (MPa)	400
Dry compressive strength (MPa)	97
Wet compressive strength (MPa)	55

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### FISICAL PROPERTIES

Particle Size (% weight retained)	0.0 % a 63 $\mu\text{m}$ 1% at 32 $\mu\text{m}$
Loose bulk density ( $\text{kg}/\text{m}^3$ )	900
Bulk density (compacted) $\text{kg}/\text{m}^3$	1350

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