

# GYPROC HARD COAT

Product Data Sheet



SpecSure®

## Applications

Background/lining	Coat thickness mm	Approx. weight set and dry kg/m <sup>2</sup>	Approx. coverage m <sup>2</sup> /1000kg
Common brick walls and concrete bricks (with raked joints)	11	9.3	115 - 130
Engineering bricks (with raked joints)	11	9.3	115 - 130
Dense aggregate and lightweight aggregate concrete blocks	11	9.3	115 - 130
Aerated concrete blocks (pre-treatment may be necessary to control high suction)	11	9.3	115 - 130

\*When applying by plaster projection machine, an allowance should be made for a reduction in coverage of approximately 10%.

## Overview

Gyproc Hard Coat is a gypsum based undercoat plaster for use on most masonry backgrounds. Applied in conjunction with a final coat of Gyproc finish plaster, it provides a smooth, inert, high quality surface to internal walls. The finished combination has excellent impact resistance, quick surface drying, a high resistance to efflorescence, and gives a durable base for the application of decorative finishes. Gyproc Hard Coat is a lightweight, retarded hemihydrate, pre-mixed gypsum plaster, incorporating special aggregates and additives, requiring only the addition of clean water to prepare it for use. It is suitable for application by hand or by plaster projection machine.

## Standards

Gyproc Hard Coat complies with *EN 13279-1 types B4/20/2 and C3/20*, and is manufactured under a quality system independently audited and certified as conforming with *ISO 9001: 2000*.

## Performance

### Fire Protection

Gypsum plasters are non-combustible when tested in accordance with relevant EN and BS standards, achieving Euroclass A1 and satisfying the requirements for Class 0 surfaces in the National Building Regulations. They provide good fire protection due to the unique behaviour of gypsum in fire.

When gypsum-protected building elements are exposed to fire, dehydration by heat (calcination) occurs at the exposed surface and proceeds gradually through the gypsum layer. Calcined gypsum on the exposed face adheres tenaciously to uncalcined material, retarding further calcination which slows as the thickness of calcined material increases. Once the gypsum layer is fully calcined, the residue acts as an insulating layer while it remains intact.

### Air-tightness

When applied to masonry walls Gyproc Hard Coat finished with a Gyproc finishing plaster can provide a significant contribution to the overall air-tightness performance strategy of a building. Test results undertaken in a UKAS accredited laboratory demonstrate that the application of 11mm Gyproc Hard Coat + 2mm Gyproc Skimcoat finish plaster over 100mm Irish manufactured concrete blocks, laid on edge, can offer an air permeability performance of 0.03m<sup>3</sup>/h.m<sup>2</sup> (50pa)

### Thermal resistance

11mm Gyproc Hard Coat with a final coat of 2mm Gyproc finish plaster (total thickness 13mm) has a thermal resistance(R) of 0.04m<sup>2</sup>K/W.

## Acoustic performance

The application of Gyproc Hard Coat improves the sound insulation performance of masonry walls. Gyproc Hard Coat adds additional mass to the wall and seals the porous nature of the masonry, restricting the passage of sound energy.

Building Regulations (ROI) Technical Guidance Document Part E: Sound 2014 currently requires that for new dwelling units and material changes of use to existing buildings creating dwelling units, all separating walls offer a minimum sound insulation performance of at least 53  $D_{nT,w}$ dB. Where Northern Ireland Building Regulations apply, Technical Booklet G: Resistance to the passage of Sound 2012 currently requires an airborne sound insulation performance for new dwellings of 45  $D_{nT,w} + C_{tr}$  dB. The application of 11mm Gyproc Hard Coat + 2mm Gyproc Skimcoat applied to both sides of a typical 7.5N 215mm concrete blockwork

party wall has demonstrated site tested airborne sound insulation performances as high as 62  $D_{nT,w}$ dB (57  $D_{nT,w} + C_{tr}$  dB). Flanking design, building materials and workmanship may vary from site to site and should be taken into consideration. Further information on the test evidence referenced can be provided upon request.

## Effect of condensation and other moisture

Gyproc Hard Coat should be protected from exposure to moisture. Prolonged or repeated exposure to moisture may cause a loss of strength and / or adhesion.

## Effect of temperature

It is recommended that the background temperature should be at least 5°C and that the plaster should not be subjected to temperatures below 5°C before it has set. Dry bagged plaster is not affected by low temperature. The plaster is not suitable for use in situations where the temperature exceeds 43°C.

## Installation

### Resistance to efflorescence

Gyproc Hard Coat offers high resistance to efflorescence migration from background to surface, unlike sand and cement.

### Resistance to cracking

No shrinkage cracking will occur with the use of Gyproc Hard Coat with a Gyproc finish plaster, unlike sand and cement.

### Coverage

Approx Coverage per bag m <sup>2</sup>	Setting time hours	Water requirement litres	Dry set weight kg/m <sup>2</sup>	Quantity per pallet kg
3.0 @ 11mm thickness (applied by hand) Approx 10% less if sprayed	2 - 5	15.0 per bag	9.3 @ 11mm	1125(45 bags)

\*The above dry weight does not include finish plaster

### Background preparation

Surfaces should be dry, clean and free from loose dust and dirt. They should be protected from the weather, and suitable for the chosen specification. Some masonry backgrounds of exceptionally high suction may require pre-treatment with GypPrime to control their suction.

### Storage

Bags should be stored dry, as absorption of water shortens the setting time, causes set lumps to form in the bags and may reduce the strength of the set plasterwork. If storing on a concrete floor, dry timber platforms should be provided. Gyproc Hard Coat stored correctly has a shelf life of 16 weeks and bags are printed with the 'use by' date in order to permit use in strict rotation.

### Mixing

Gyproc Hard Coat is pre-mixed and only clean water needs to be added to prepare it for use. Hand mixing should be carried out in a clean tray or bath. Excessive mechanical mixing should be avoided. Tools and water used in mixing must be clean. Contamination from previous mixes can shorten the setting time and in turn reduce the strength of the plaster when set.

### Application

Gyproc Hard Coat should be applied with firm pressure, built out to the required thickness, ruled to an even surface and lightly scratched to form a key for Gyproc finish plaster. For machine application, the plaster should be sprayed on to the background in the form of a ribbon. The consistency should allow the ribbons to run together. When a substantial area is covered, Gyproc Hard Coat is worked and ruled as in hand plastering.

### Finishing

Achieve a smooth, high quality surface finish ready for decoration using a suitable Gyproc finish plaster over Gyproc Hard Coat.

### Drying

Gyproc Hard Coat dries from the surface, appearing surface dry before it is fully dry in depth. Environmental conditions and ventilation can also affect the drying time of the plaster.

### Maintenance

Gyproc Hard Coat with a final coat of 2mm Gyproc finish plaster provides a plastering system suitable for high impact / wear areas. If the plaster is correctly applied, it should minimise any requirements for future maintenance.

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