Gypsol

For use with underfloor heating and cooling systems

Gypsol High Thermal Conductivity (HTC) is one of many great innovations in flowing screed technology from LKAB Minerals. Gypsol HTC is a screed specifically designed for use with underfloor heating and cooling systems. It may be used with conventional heat sources as well as with renewable technologies. It is not pipe specific and is suitable for use with any underfloor heating system and in any type of construction, subject to suitable engineering. It is suitable for use over timber floors, Lewis decking, and more traditional concrete and masonry systems.

Suitable for both new build and refurbishment projects, Gypsol HTC offers an environmentally friendly screed to help improve the sustainability criteria of your project. Gypsol HTC is available from our manufacturing partners, and may be installed by any of their approved installers. It can be used to thinner depths than conventional screeds, requiring just 20mm minimum cover to pipes, subject to substrate suitability. Gypsol HTC is suitable for use with all types of floor covering, and is compatible with the Gypsol Rustique Sealer (see Rustique datasheet), and offers the ultimate in underfloor heating efficiency and comfort.

Case study - Energy efficient self-build house

This energy efficiency home was built to achieve level 6 under the Code for Sustainable Homes. Features include photovoltaic roof tiles, solar panels and a low temperature ground source heat pump. Underfloor heating was specified at both ground and first floor levels.

The designer needed a screed which could respond quickly to changes in air temperature within the house, both in terms of heating and cooling. A thin section of screed was required to reduce material use and help reduce the amount of screed to be warmed. It also needed to be easy to place at both floor levels, as well as fully encapsulate the underfloor heating pipes.

Gypsol HTC was able to meet all of the requirements of the specification and offer additional benefits. Gypsol screed can be laid thinner than traditional screeds, and in this project the depth on both floors was reduced from 75mm to 50mm. Gypsol HTC achieves high levels of energy efficiency at very low flow temperatures -fitting perfectly with the ground source heat pump in this project. An increase in the depth of insulation was also possible due to the reduction of screed depth, improving the overall performance of the floor. The raw material in Gypsol is a by-product of the chemical industry and requires no high energy processing. This reduces the product's carbon foot print considerably when compared to traditional sand and cement.

WHAT'S SPECIAL ABOUT GYPSOL HTC?

In addition to all of the usual benefits available with Gypsol screeds [1] Gypsol HTC also offers:

- Designed specifically for use with underfloor heating/cooling systems
  Suitable for both warm water and electric underfloor heating
- High Thermal Conductivity
  Independent tests achieved 2.5W/mK [2]
  For UK calculations use 2.3W/mK [3]
- Reduced depth
  Minimum 20mm cover required to underfloor heating conduits [4]
- High Strength
  Minimum C30-F5
- Complete versatility of design
  Suitable for all types of underfloor heating pipe or cable
  Can be installed by any suitability trained Gypsol installer [5]
- Better heating performance
  Complete pipe encapsulation allows easy heat transfer
  Suitable for any heating system and pipe size
- Low flow temperatures
  Reduced energy consumption and CO2 emissions
  Reduced heating costs
- Low thermal inertia and rapid response
  Heats up quickly and cools quickly allowing greater system control
  Improved comfort level and reduced thermal "overshoot"

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[1] See "Gypsol Range of Screeds" Data sheet
[2] Tested to ASTM 1530 by Warwick University using normative sample.
[3] Allows for testing tolerances
[4] Some cosmetic pipe mapping may be observed
[5] For installers contact your local Gypsol technical and specification manager on 0800 6226023

Information presented is intended for guidance only and given in good faith but without guarantee. Gypsol HTC Datasheet 08–01 EN, 19-03.