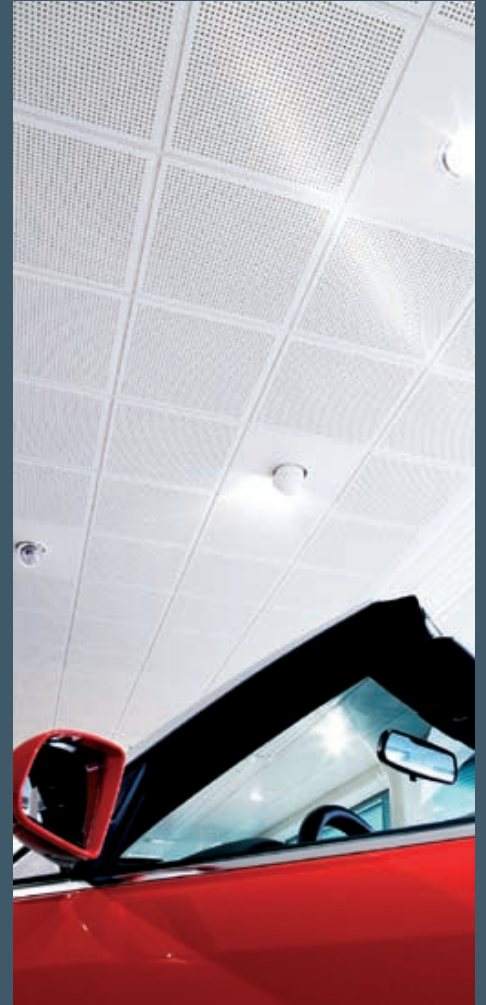


# Gyptone ceilings

## 4.2 Function and properties



**Gyptone®**

Reflecting everyday life

# Function and properties

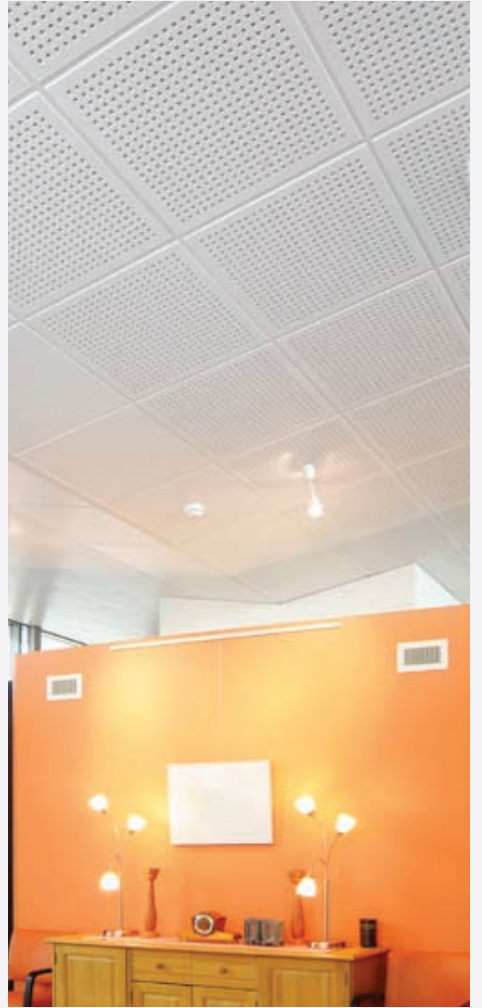
Behind all Gyptone products is a long list of built-in properties.

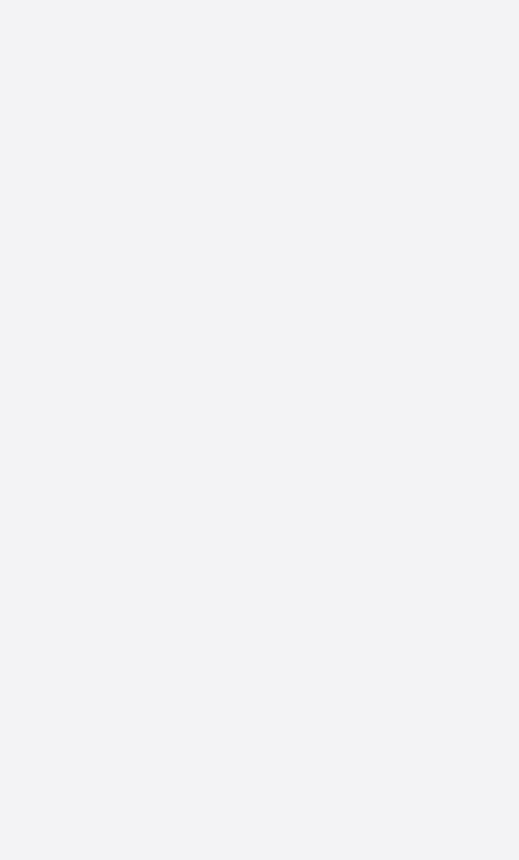
The combination of strong properties and several design possibilities forms the basis for a beautiful, robust and reliable solution.

In this brochure we go through the most important properties.

On [www.gyptone.com](http://www.gyptone.com) you will find more detailed information.

- Fire
- Loading
- Emission
- Weight
- Light reflection





## Fire

All Gyptone ceiling tiles carry the CE mark in relation to EN 14190 "Gypsum plaster-board products from reprocessing". This means that the products are among other things fire tested and meet the European fire requirements.

### Materials

All of our standard products plus all of our standard structures are tested and rated as A2-s1,d0 or B-s1,d0. The products are tested among other things for combustibility, smoke formation, plus falling drops. The Nordic requirements for materials, which are used for ceiling structures, are normally A2-s1, d0 or lower ratings.

### Protective linings

There will continue to be requirements in the Nordic countries for protective linings on surfaces and their ability to protect structures behind them. The term for this requirement in Nordic building regulations is for example in Denmark K1 10 (new term) or Grade 1 protective lining (existing term).



## Loads

Loads for all Gyptone acoustic ceilings and walls excl. edge type D1 products.\*

Compared with many other ceiling materials Gyptone ceilings can withstand a high load, regardless of whether the tiles are perforated or not.

This gives great flexibility when working with lights, speakers or ventilation.

Cut-outs for equipment do not to a great degree affect the ultimate strength either.

### Sagging

Damp has an effect on the risk of sagging. The combination of high loads and high humidity can in the long term result in visible sagging, but seldom in breaks.

For a perforated unloaded Gyptone ceiling we recommend 70% as the highest level of relative humidity. For Gyptone ceilings without perforations the recommendation is 90% as the highest relative humidity. For Gyptone ceilings a point load of a maximum of 3 kg in the centre of the tile is recommended. Equipment weighing more must be replaced or suspended separately.

### Thermal impact

A gypsum ceiling's load capacity is reduced in temperatures over 50 degrees. If one has heat conducting equipment this must be fixed so that direct heat transfer is prevented. This can possibly be achieved by separate suspension straps.

### Grid

The grid is often loaded with built-in fixtures or suspended signs or other decorations. Loading values for the different grids are listed in the brochures concerning edges and systems.

You can also find information on [www.gyptone.com](http://www.gyptone.com).

In connection with calculating the total load it is important to take into consideration the ceiling tile's weight.

\* Ceiling tiles with edge D1 cannot be loaded with more than 1 kg.



We spend a lot of time inside buildings. Therefore it is important to have a good indoor climate, which is a combination of several things.

Gyproc A/S belongs to the Danish Indoor Climate Labelling Association, a voluntary arrangement which gives producers and suppliers the possibility of uniform conditions when testing, for e.g. for degasification and smell.

Test methods and the indication of values are standardised for wall and ceiling systems. The different tests comprise partly a chemical analysis in a climatic chamber and partly an assessment by a "live" test panel.

The results are summarised in a relevant indoor climate time value, expressed as the time it takes before degasification has reached an acceptable level. This is described as the "threshold value".

The time value, which is expressed in units of 10, is at the lowest value 10 days and at the highest 30 days. Products with a time value greater than 30 days cannot attain a certificate.

Gyptone acoustic ceilings and walls have certificates with the lowest time value of 10 days.

You can read more on [www.gyptone.com](http://www.gyptone.com) where the certificate is also in a PDF document version.





## Weight

Gyptone 12.5 mm plasterboard ceilings without perforations weigh approx. 9 kg/m<sup>2</sup>.

The weight of perforated plasterboards is proportionally reduced by an increase in the perforation area.

Gyptone Quattro 41 with a total perforation area of 16% weighs approx. 7.6 kg/m<sup>2</sup>.

# Light reflection

A surface's reflection of light is based on whiteness, the surface's evenness and the existence of holes/perforations. Light reflection is often measured in relation to ISO 7724, where the light's reflection is measured at varying angles.

## Values

The guiding values for Gyptone ceiling products are measured on factory painted tiles with the standard colour NCS 0500.

For unperforated tiles this results in a light reflection of 82%. This value is reduced by the degree of perforation, however not the entire value as the whiteness of the holes' edges also contributes to the reflection. The specified method of measurement does not suit well Gyptone's perforated ceiling products. The attained values have too great a spread depending on where measuring is done on the tile.

On the basis of the attained measurement values we have therefore worked out an evaluation of the patterns Line, Point and Quattro. Based on this light reflection on Gyptone Quattro 20 would be 70-75%.

Values for the other Gyptone ceiling products are found in the brochures concerning the respective patterns.









# www.gyptone.com

Gyptone.com is not just a home page. Here you can find all Gyptone products "live" – see [www.gyptone.com](http://www.gyptone.com) – choose the 3D product gallery and you will enter a 3D universe where all our products can be turned around and over, put together with different systems and displayed exactly the way you want them in your project.



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