Strong and light are the unique features
The Natural Backbone

We would like to emphasise that we would be pleased to help you select the honeycomb paper suitable for your production conditions. Because of our years of experience we can also help in solving any technical problems you may encounter. Our challenge: **to be your natural choice in honeycomb.**

Axion offers honeycomb with various parameters:
- thickness: from 8 mm to 150 mm
- cellsize: 10, 13, 15, 21, 25, 30 and 40
- standard width (unexpanded): 1000, 1080, 1225, 1250, 1300 and 1600 mm
- papertype: 120 gr/m2, 140 gr/m2, 160 gr/m2, 170 gr/m2

The choice of above-mentioned parameters depends on your production conditions and products. Axion Technology can be of assistance in making this choice. The price of the honeycomb depends on these parameters and the needed quantity.

Other applications of honeycomb paper:
- packaging industry (e.g. production of carton pallets)
- black and whiteboards
- construction purposes: floor panels and lightweight partition walls
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The Production

The production of honeycomb doors is easy:
1. preparation of a wooden or a chipboard frame
2. one side of each of the two boards is glued
3. the frame is glued on one board
4. the honeycomb is placed in the frame. It can be expanded manually or preferably mechanically.

Manually: the honeycomb is stretched a little bit further than the desired width. As soon as the honeycomb is released, it will shrink a little. The honeycomb is placed in the frame and fixed with staples. This method is rather labour intensive and is therefore not used in large production.

Mechanically: a machine is used to expand the honeycomb, fix its structure and cut it to the desired length. There is a difference between “cold expanding” and “warm expanding”

With cold expanding the honeycomb is stretched mechanically in the same way as manually. The honeycomb does not have to be fixed with staples, because it springs back to the desired width by overstretching.

With warm expanding the honeycomb is dried in the oven. The advantage of this method is that the humidity is extracted from the paper. That way the honeycomb can absorb more humidity out of the glue with the result that during the pressing phase the board will absorb less humidity. A smooth door will be the result.

Axion Equipment can deliver and install all the above-mentioned machinery for you. There is a modular program of basic machines with different options available which optimise the model for each application.

5. Finally the last board, which has been glued in advance, is applied to the outside. Everything will be put in a press for pressing. Then further processing follows (edges, locks, wearing irons). The honeycomb doors can be produced in a “hot” or “cold” process. In the same way furniture panels can be produced. Precision in the production of components filled with honeycomb ensures further processing with the use of the most modern and accurate techniques of surface finishing, e.g. overprint technology.
Paper Applications

Advantages of the use of paper honeycomb in the production of panels for doors, furniture, partition walls and other construction elements:

- low price
- light weight and with that a low weight of the final product
- simple in use in your production process
- quality level stability
- an environment friendly final product

Paper honeycomb is used by the largest panel manufacturers worldwide in any panel or door type: flat, painted, with wood-like film, veneered, Molded skins doors and steel doors. It is also applied for the production of “board and frame” furniture, e.g. by IKEA. And the use of honeycomb in the packaging industry is increasing.
About AXXOR

Axxion Industries was founded in 1993 by engineers with more than 10 years of experience in the production of paper honeycomb. Axxion has developed a new honeycomb production system for producing good quality against low cost in order to offer the customers the best service. Today, we are a European leader in the production of endless honeycomb.

Since the very beginning of our business we have been continually assessing our assembly techniques resulting in constant improvement in the technology and process. Axxion Group includes: Axxion Industries B.V., Axxion Industries Polska Sp. z.o.o, Proxxis GmbH, Axxion Technology B.V., Axxion Equipment B.V. and the commercial company Axxor B.V. All commercial sales activities of the Axxion Group are handled by Axxor. Proxxis in Germany and Axxion Polska in Poland provide sales support to Axxor. All production of honeycomb occurs in Axxion Industries. At the moment, Axxion Industries operates from one location in Zwolle. However it is the intention, in the nearby future, to open more production units in other locations. All machinery built to optimise the use of honeycomb within the panel and packaging industry will be designed, built and delivered by Axxion Equipment. Axxion technology specialises in designing and developing refinement techniques for honeycomb, which combined with other materials results in products with enhanced functional properties. For example: honeycomb filled structures with fire resistant properties which can be used in the manufacture of fire doors. Axxion technology also provides support to Axxor’s customers in their normal use of the honeycomb. For example: process analysis, optimising and troubleshooting. The headquarters of our company is located in Zwolle, the Netherlands. The production assembly consist of honeycomb production lines, which enable us to produce approximately 8,000 tons of honeycomb a year.

Since 1996 our company has a sales office and warehouse in Poznan, Poland, named Axxion Industries Polska. Poland and the other countries in Eastern Europe are served by this office. Proxxis GmbH sells honeycomb and honeycomb board in the German speaking area of Europe. For the honeycomb board Proxxis co-operates with Yamaton Paper GmbH in Rostock, Germany. Yamaton is specialised in packaging solutions.
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