



355IP 07/12 PP Honeycomb Core
Information Page

# **Light Weight Polypropylene Damping Core**



**PP Honeycomb** is a rigid, lightweight acoustic material, made from polypropylene plastic and commonly used as a core material in the manufacture of composite panels.

Its hexagonal cell structure, commonly referred to as "honeycomb" provides high acoustical properties combining excellent sound absorption and sound damping properties. Thermo fused to the honeycomb cells are non-woven polyester bonding scrims with a polypropylene barrier film to limit resin consumption.

This unique structure allows sound waves to be trapped inside the cell, reducing sound reflection. Due to its viscoelastic nature, the trapped sound waves rebound inside the cell walls, until they are completely transformed into heat and hence are well adapted for applications requiring vibration damping.

Primarily used as a core material, Pyrotek offers **Honeycomb** as a choice of core material in the manufacture of its range of **'Subdue' products** (*Refer Information page 'Subdue®-315IP'*). When used with plywood, cork or mass loaded vinyl, an effective, rigid and free standing acoustic barrier can be created to target noise in marine, automotive and industrial applications. Combined with light weight plywood, it will offer substantial weight savings in sensitive areas, without compromising strength. The product is easily cut to size on site, or during manufacture and can include decorative finishes to provide a quick and easy interior solution.

## **FEATURES**

- Lightweight, durable, structurally stable
- Thermally fused unique hexagonal cell structure
- Inflammable non-toxic smoke
- Odour and mould/rot resistant
- Easily cut to size on site, or during manufacture
- Available in two densities
- Available in a range of thicknesses from 6m to 60mm
- Excellent fatigue and impact resistance
- Sound attenuation greater than 22dB

### **APPLICATIONS**

#### Marine

- Cabinetry, partitions and lining
- Floors and floated floors
- Applications requiring weight savings

#### Automotive

- -Power generation units
- -Car, truck and bus engine compartment, fire wall and bonnets

## Industrial

- -Acoustic and thermal insulation for air conditioning duct work
- -Can be used as a core in free-standing walls, bulkheads, partition walls, doors, cabinetry and floors

## **PRODUCT SPECIFICATIONS**

PRODUCT CODE	PRODUCT THICKNESS (mm)	CELL DIAMETER (mm)	DENSITY (kg/m³)	SHEET DIMENSIONS* Length (mm) x Width (mm)	COLOUR
PP8-80	6 to 60	8	80-90	2440 x 1220	White
PP12-70		12	70-80		

<sup>\*</sup>Other sizes available on request

## **MATERIAL PROPERTIES**

PRODUCT CODE	THERMAL CONDUCTIVITY (w/mK)	THERMAL STABILITY °C	SHEAR STRENGTH (MPa)	TENSILE STRENGTH GB 1452-87 (N/cm²)	PEEL STRENGTH GB 1457-88 (N/mm/mm)	COMPRESSIVE STRENGTH GB 1453-87 (MPa)
PP8-80	0.102	-30 to +80	0.5	120	12	2.3
PP12-70	0.102					2.0

Caveats: Specifications are subject to change without notice. The data in this document are typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC is not responsible for differing outcomes from using their products. Pyrotek disclaims and liability for changes or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or be products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See <a href="https://www.pyroteknc.com/disclaimer">www.pyroteknc.com/disclaimer</a>.

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