

TECHNICAL SPECIFICATION ST-GQ-EXA5-GB

Product Description: Polypropylene Honeycomb sheet coupled ABA with skins in solid PP, with Matt finish.

Application: This article can be converted to produce reusable packaging or for generic applications.

Basic component: Polypropylene mineral filled compound (C₃H₆)n(C₂H₄)m

Standard colours: White, Grey 835 – RAL 7046 other colours available upon request


Sheet length (minimum/maximum): 500/6000 mm

Sheet width (minimum/maximum): upon customer request / max: 1250 mm

Standard finish: Matt/Matt Ra = 3

EXALITE 080 AVAILABLE OPTIONS	CORE THICKNESS (mm)	SKINS THICKNESS (mm)	TOTAL THICKNESS (mm)	TOTAL GRAMMAGE (g/m ²)
EXA 080-04	8	0,4	8,8	1750
EXA 080-06		0,6	9,2	2150
EXA 080-08		0,8	9,6	2600
EXA 080-10		1,0	10,0	2950

Technical Features	Method	Acceptance Criteria
Length	ISO 15013	+/- 3 mm **
Width	ISO 15013	+/- 2 mm **
Total thickness	ISO 15013	+/- 0,3 mm
Skins thickness	ISO 15013	+/- 0,05 mm
Thickness omogeneity	ISO 15013	≤ 0,15 mm
Grammage	ISO 845	+/- 5%
Diagonals difference L ≤1000	ISO 15013	< 3 mm
Diagonals difference L ≤2000	ISO 15013	< 6 mm
Diagonals difference L >2000	ISO 15013	< 10 mm
Dimensional stability (1h/90°C) MD	ISO 15013	< 0,5 %
Dimensional stability (1h/90°C) TD	ISO 15013	< 0,1 %
Sheet planarity (20°C)*		< 10 mm
Coefficient of linear expansion MD (25-90°C)*		X < 100 µm/(°C*m) +/-20
Coefficient of linear expansion TD (25-90°C)*		X < 100 µm/(°C*m) +/-20
Avarage thermal conductivity (20°C) (referred to a thickness of 11,2 mm)*		0,08 W/mK
Compression strength	ISO 844	≥ 1500 kPa
Surface resistance to thermal shocks Cycle: 4 hours at +50°C, 4 hours at -20°C and 16 hours at room temperature	UNI 9429	15 cycles without showing superficial defects
Surface resistance to dry heat	UNI EN 12722	Resists up to 120°C without damage <u>within the testing parameters</u>
Surface resistance to wet heat	UNI EN 12721	Resists up to 100°C without damage <u>within the testing parameters</u>
Hardness (pencil test)	UNI EN 10782	Hardness equals a F pencil
*Unstandardized internal method		

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** Karton's Standard Dimensional tolerances. These tolerances can be adjusted on customer's demand. Please notify Karton's sales department in writing, should you have different requirements.

Chemical features

Main component: Polypropylene mineral filled compound (PP).

Polypropylene guarantees waterproof properties and resistance to oil, fat, saline solutions, and also acidic and alkaline solutions at temperatures lower than 60°C. Polypropylene shall not be put into contact with strong oxidizing substances, nitric acid, hydrogen peroxide and chlorosulphonic acid.

Specifically, Exalite® has been tested in conformity with UNI EN 12720 standard (16 hours) and it has been proven to be resistant to the following liquids/solvents without showing any visible change: Acetic acid, acetone, ammonia solution, citric acid, detergents, disinfectant, ethanol, ethyl-butyl acetate, olive oil, paraffin oil, sodium carbonate, sodium chloride, water and beer. The following liquids/solvents, instead, either left visible marks, visible in many different trajectories of observation, or slight changes in the surface's shine: coffee, stamps ink, tea and wine.

Standard additivation – upon Customer request – during quotation phase

- Light stabilizer antiUV (base LDPE)
- Antistatic (base PP)
- Colour masterbatch (base LDPE)
- Flame retardant (base PP): to be tested and certified on the basis of national regulations

Customizations available – upon Customer request – during quotation phase

- Corona treatment
 - Superficial tension ≥ 46 dyn / cm
 - On both sides of the sheet
 - Average duration 6 months under proper stocking conditions (i.e. packaged sheets properly stocked in dry places). We recommend as a good practice to check and record corona treatment before printing process and report any anomalies to Karton's technical departments.
- Flexographic print online, 1 colour

Suggested product use

Working temperature range is included between: $-20^{\circ}\text{C} < T < +60^{\circ}\text{C}$. Polypropylene can withstand peak temperatures included between $-20^{\circ}\text{C} < T < 120^{\circ}\text{C}$ without damage. Whilst designing and converting finished articles please mind the above-mentioned coefficient of linear expansion.

Regulatory requirements

- Directive 94/62/CE and subsequent amendments
- Regulation 1907/2006/CE of 18th December 2006 (REACH)

Packaging Reference Standards

- **EN 13428 Packaging. Requirement specific to manufacturing and composition. Prevention by source reduction.**
Minimization of hazardous substances: the overall concentration of heavy metals, lead, chromium VI, cadmium and mercury is lower than 100 ppm.
- **EN 13429 Packaging. Reuse.**
 It's a responsibility of the Customer to assess that the product design, as described in this specification, is fit for completing a suitable number of logistic operations and /or rotations in the normally foreseeable using conditions adopted by the customer.

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- **EN 13430 Packaging. Requirements for packaging recoverable by material recycling.**
Polypropylene sheets are made of recyclable thermoplastic polyolefin. It's a responsibility of the Customer to assess suitability of the shape, ensure effective emptying and packaging sorting system. The symbol associated to these products is 05 (PP), according to the dispositions of the Association of Plastic Industry.
- **EN 13431 Packaging. Requirements for packaging recoverable in the form of energy recovery, including specification of minimum inferior calorific value.**
Calorific value 44-46 MJ/kg
- **EN 13432 Packaging. Requirements for packaging recoverable through composting and biodegradation. Test scheme and evaluation criteria for the final acceptance of packaging.**
Not applicable because polypropylene is classified as biologically recalcitrant.

**Packaging and selling units**

Several packaging schemes are available upon customer request.

Environmental label**Validation for use**

This specification is meant to provide a description of the product and its performances. Validation of specific appropriateness for use, specific risk assessment and behaviour of this product after converting, use and in specific conditions that are not described into this document remains under property and responsibility of the customer.

If applications, treatments and risks associated with the product are different from those mentioned in this technical specification, we kindly ask you to share your needs in order to design a customized product. Karton S.p.A. can support the validation stage of your process changes.

Further information

Please note that this information regards the product as commercialized by Karton Spa and does not cover any other treatment, process or handling performed by the Customer on this product.

Any further regulatory requirement and testing not specifically included in this specification must be agreed prior to submit commercial order.