

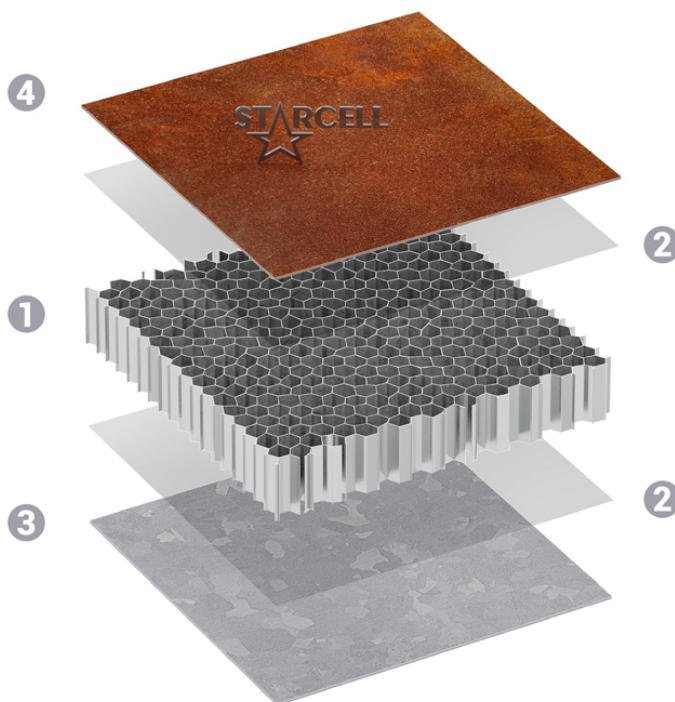
## METALCELL® Rusty - CT (6,35/19)(0,5-0,5)S(1)

### Description of the product

CT is a sandwich panel with a cosmetic finish, made using a panel without finish such as the RAWCELL® Metal FPA to which a CORTEN steel skin is applied in place of one of the two galvanized steel sheet structural skins. The panel is supplied without pre-oxidation. Main fields of application: construction, furniture.

### Layers

- 1) INTERNAL CORE  
aluminium honeycomb  
(Starcell production)  
aluminium alloy: 3000 series  
density: 29 - 40 - 56 - 65 - 80 kg/m<sup>3</sup>  
cell diameter:  
6.35 mm (standard);  
10 - 12.7 - 19 mm (on request)
- 2) ADHESIVE  
thermoplastic or polyurethane
- 3) EXTERNAL BACK SKIN  
raw or primed galvanized steel sheet  
skin thickness:  
0.3 - 0.5 - 0.6 mm (standard)  
0.8 - 1.0 mm (on request)
- 4) EXTERNAL FRONT SKIN (FINISH)  
CORTEN steel sheet  
skin thickness:  
0.3 - 0.5 - 0.6 mm (standard)  
0.8 - 1.0 mm (on request)



### Technical sheet of the support panel

#### PRODUCT ID CODE

| Code structure | Value in this sheet | Meaning                                         |
|----------------|---------------------|-------------------------------------------------|
| METALCELL®     |                     | family to which the product belongs             |
| Rusty          |                     | subfamily to which the product belongs          |
| CT (n/n)(n-n)  |                     | panel type                                      |
| CT (n/ ) ( )   | 6,35/ =             | size (mm) of the hexagonal honeycomb cell       |
| CT ( /n) ( )   | /19 =               | panel thickness (mm)                            |
| CT ( / ) (n-n) | 0,5-0,5             | thickness (mm) of the two skins                 |
| S(n)           | 1=                  | standard dimensions (mm) - S(1) = 1.000 X 1.000 |

## CHARACTERISTICS OF MATERIALS AND COMPONENTS

### Front finishing layer

|                            |                                                          |
|----------------------------|----------------------------------------------------------|
| material:                  | steel sheet                                              |
| type:                      | corten                                                   |
| standard thicknesses (mm): | 0,8 - 0,3 - 0,5 - 0,6 (squared); 0,8 - 1,0 (not squared) |
| surface appearance:        | natural - coarse - oxidized                              |

### Hexagonal cell honeycomb

|                            |                        |
|----------------------------|------------------------|
| material:                  | aluminium foil         |
| type:                      | 3000 series alloy      |
| foil thicknesses (µm):     | 50 - 60 - 70           |
| density (kg/m³):           | 29 - 40 - 56 - 65 - 80 |
| standard cell sizes (mm):  | 6,35                   |
| on request cell size (mm): | 10 - 12,7 - 19         |

### Back structural skin

|                            |                                                    |
|----------------------------|----------------------------------------------------|
| material:                  | steel sheet                                        |
| type:                      | hot dip galvanized                                 |
| standard thicknesses (mm): | 0,3 - 0,5 - 0,6 (squared); 0,8 - 1,0 (not squared) |
| surface appearance:        | raw - galvanized - primed                          |
| standard adhesive:         | thermoplastic - polyurethane                       |

## PHYSICAL AND DIMENSIONAL CHARACTERISTICS OF THE PANEL

### Dimensions

|                 |                                                                     |
|-----------------|---------------------------------------------------------------------|
| standard (mm):  | S(3) = 1.000 X 2.150 - S(7) = 1.250 X 2.550 - S(12) = 1.500 X 3.050 |
| special (mm):   | 1.500 - maximum length: 4.300                                       |
| tolerance (mm): | ± 1 (squared panels)                                                |

### Thicknesses

|                 |              |    |      |    |    |    |    |
|-----------------|--------------|----|------|----|----|----|----|
| standard (mm):  | 5            | 10 | 12,7 | 15 | 20 | 25 | 30 |
| special (mm):   | from 4 to 60 |    |      |    |    |    |    |
| tolerance (mm): | ± 0,3        |    |      |    |    |    |    |

### Weights\*

|                                                   |       |      |      |      |      |      |      |
|---------------------------------------------------|-------|------|------|------|------|------|------|
| weights referred to standard thicknesses (kg/m²): | 5,44  | 5,71 | 5,85 | 5,98 | 6,25 | 6,52 | 6,79 |
| tolerance (kg/m²):                                | ± 0,2 |      |      |      |      |      |      |

\*The weights refer to panels with the following characteristics:

cell size (mm): 10  
foil thickness (µm): 70  
thickness of the skins (mm): 0,3

### MECHANICAL CHARACTERISTICS OF THE PANEL

The characteristics of this sheet refer to the following type of panel:

METALCELL® Rusty - CT (6,35/19)(0,5-0,5)S(1)

Starcell's Technical Department will gladly work with customers to determine the features of other panel configurations

| Type                                   | Standard            | Characteristic value                       |    |      |    |         |    |    |
|----------------------------------------|---------------------|--------------------------------------------|----|------|----|---------|----|----|
| standard thicknesses                   | -                   | 5                                          | 10 | 12,7 | 15 | 20      | 25 | 30 |
| maximum load* (N):                     | DIN 53293; EN 14125 |                                            |    |      |    | 3.900   |    |    |
| deflection at Max* load (mm):          | DIN 53293; EN 14125 |                                            |    |      |    | 3,58    |    |    |
| resistance to peeling* (N):            | DIN 53295           | > 130 (min.) - >380 (average)              |    |      |    |         |    |    |
| compressive strength* (Kg/cm²):        | UNI 4913            | 27                                         |    |      |    |         |    |    |
| elasticity modulus (E)* (N/mm²):       | DIN 53293           |                                            |    |      |    | 130.000 |    |    |
| stiffness modulus (R)* (N/m²):         | DIN 53293           | 1.000                                      |    |      |    |         |    |    |
| thermal expansion coefficient* (°C⁻¹): | -                   | 1,2x 10⁻⁵                                  |    |      |    |         |    |    |
| operating temperature (°C):            |                     | from -40 °C to +75 °C (on request +120 °C) |    |      |    |         |    |    |

(\*) values obtained by Starcell's Internal Laboratory.

### CERTIFICATIONS

| Type                            | Standard                            | Sector       | Class     |
|---------------------------------|-------------------------------------|--------------|-----------|
| fire behaviour of the panel     | EN 13501-1                          | CIVIL        | A2-s1, d0 |
| fire behaviour of the panel     | IMO Res. MSC.307(88) - 2010FTP Code | SHIPBUILDING | C         |
| fire behaviour of the panel     | UNI 11170-3                         | RAIL         | 0         |
| fire behaviour of the honeycomb | ISO 1182                            |              | M1 F0     |

### PROPERTIES

- Very high resistance to bending, shear and tensile stress.
- Excellent dimensional stability, also in terms of flatness over time.
- Very good compressive strength (due to aluminium honeycomb).
- Excellent ratio between mechanical performance (high) and weight (content).
- Excellent weather resistance.
- Ideal for outdoor applications due to its excellent resistance to aggressive weather.
- Ease of machining with manual or CNC equipment suitable for machining steel.
- Wide operating temperature range.
- Excellent fire resistance and low emission of toxic fumes.

## FIELDS OF APPLICATION

Typical applications of METALCELL® Rusty - CT are mainly building façades.

## STORAGE

The METALCELL® Rusty - CT panel is a product in the "semi-finished products" category and therefore is subject to further processing; we recommend storing the panels horizontally in a closed and dry environment, possibly away from heat sources and to support them along their edges.

## SAFETY DATA SHEETS

On request, safety data sheets for this product are available in Italian or English. For more information, please visit: [www.starcellspa.com](http://www.starcellspa.com).

*Scheda tecnica aggiornata al 20-09-2019*