



# THERMOFORMING

## *PREP. STAGE: DRYING PROCESS*

ROHACELL® becomes thermo deformable at temperatures between 165°C (329°F) and 230°C (446°F) (depending on grade, density, thickness and complexity of shape). Before thermoforming the sheets should be dried at 130°C (266°F) by using a heating cabinet with air circulation.

THICKNESS (mm)	THICKNESS (in.)	DRYING TIME
<25	<1	4 hours
25 to 50	1 to 2	6 hours
50 to 75	2 to 3	8 hours
75 to 100	3 to 4	10 hours
>100	> 4	12 hours

The process shall take place in an air circulation oven and each shall be separated from adjacent panels by not less than 25mm to provide a constant airflow.

All precautions regarding placement and accurate temperature control shall be strictly maintained.

The ROHACELL® sheets can be heated in an oven, between heating plates or by infrared heaters if the thickness is less than 6 mm (1/4”).

The duration depends on the sheet thickness (approximately 1mm/1min).

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Formation of parts can be achieved using a vacuum or non-vacuum diaphragm with a female/male mold or matched mould. Since ROHACELL® has a low heat capacity due to its small mass, the mold will not be subjected to extreme heat. Wood, polyester or epoxy resin molds are acceptable.

ROHACELL® sheets can be heated in an oven, between heating plates or with infrared heaters. After heating the sheet to the correct temperature for the specific grade and density (refer to tables provided in the next pages), it is transferred to the forming device.

To easily transfer the sheet with minimal resistance, generous margins beyond the finished part shape are recommended. Cooling of ROHACELL® sheets must be kept at a minimum during transfer from the heating cabinet or heating plates to the forming device. The sheet will cool rapidly when removed from the heating device as cut surface cells immediately begin to cool and subsequently contribute to cooling throughout the entire sheet.

To minimize the cooling effect and maintain the forming temperature during transfer, a protective cover on the heated foam sheet is required. Cotton cloth, breather, glass fabric or silicone rubber can all be used as a protective cover. After forming, the foam shape will cool quickly. Uniform cooling from both sides is recommended to avoid spring back. Once the formed part has cooled to 80 °C (176 °F), it may be removed from the forming tool.



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## TEMPERATURE GUIDELINES

All grades of ROHACELL® can be thermoformed, but temperatures vary depending on the product grade and density. These tables provide typical thermoforming temperatures, but specific temperature requirements vary and are dependent upon process, final part geometry and the type of equipment used. Please contact us before thermoforming Rohacell.

### ROHACELL IG/IG-F

UNIT	31	51	71	110
°C	195	195	195	195
°F	383	383	383	383

### ROHACELL HF

UNIT	31	51	71
°C	215	205	195
°F	419	401	383

### ROHACELL WF

UNIT	51	71	110	200
°C	208	210	210	205
°F	406	410	410	401

### ROHACELL WF-HT

UNIT	51	71	110	200
°C	213	215	215	210
°F	415	419	419	410

### ROHACELL RIMA

UNIT	51	71	110
°C	215	205	195
°F	419	401	383

### ROHACELL RIMA-HT

UNIT	51	71	110
°C	215	205	195
°F	419	401	383

## ROHACELL FOAM TECHNICAL PRODUCT MANUAL

### ROHACELL XT

UNIT	71	110
°C	225	215
°F	437	419

### ROHACELL XT-HT

UNIT	71	110
°C	230	220
°F	446	428

### ROHACELL SL

UNIT	71	110
°C	200	200
°F	392	392

### ROHACELL S

UNIT	51	71	110
°C	215	210	200
°F	419	410	419

### ROHACELL WIND-F

UNIT	50	60	80	100
°C	195	195	195	195
°F	383	383	383	383