

DRYING PROCESS ^{SS}

The creep compression resistance behaviour of ROHACELL® can be improved by drying and heat treating sheets prior to processing (CNC milling, thermoforming, face sheet curing, etc.). However the specific drying and heat treatment process used will depend upon several variable and the application manufacturing processes.

SHOULD I DRY ROHACELL?

Similar to other organic materials, ROHACELL® absorbs moisture from the environment. Even though it is a closed cell foam, a small amount of moisture absorption occurs through diffusion that is heavily dependent upon ambient temperature and atmospheric humidity.

Any moisture uptake can cause small dimensional changes to occur and may adversely affect creep behavior. This is because water molecules that attach to the polymer will act as plasticizers, making ROHACELL® more ductile, particularly at elevated temperatures. Additionally, steam can form during processing if temperatures exceed 100°C (212°F) - potentially affecting bonding of the skin to the foam core. Drying is especially important when processing temperatures are above 100°C (212° C), and is also dependant on the process pressure.

IS IT POSSIBLE TO RE-DRY ROHACELL®?

All ROHACELL® grades (except ROHACELL® HERO) can be re-dried. Unplanned moisture uptake after initial drying is often easily reversible.

Most non-heat treated (non-HT) sheets, but not “shapes”, can be dried again if they have been exposed to moisture. Re-drying sheet material restores original mechanical properties and, within limits, reverses some dimensional changes.



Thickness	Recommended Drying Temperature	Approximate Drying Time
<25 mm / <1 in	125 °C ± 5 °C (257 °F ± 9 °F)	4 hours
25-50 mm / 1-2 in		6 hours
50-75 mm / 2-3 in		8 hours
70-100 mm / 3-4 in		10 hours
>100 mm / > 4 in		12 hours

IMPORTANT DRYING GUIDELINES

Dry sheets in an air-circulating oven between heating plates, or use infrared heaters if sheet thickness is less than 6 mm (1/4”).

- Separate each foam panel from adjacent foam panels by no less than 25 mm (1 inch). This will ensure constant airflow around all sheets.
- All precautions regarding foam panel placement and accurate temperature control must be strictly followed.
- Drying time is determined by sheet thickness. (refer to the above table)

SPECIAL INSTRUCTIONS FOR ROHACELL® HERO

Re-drying ROHACELL® HERO sheets or shapes is not possible.

If unexpected exposure to moisture occurs, please do not attempt to re-dry the product and immediately contact your ROHACELL® representative for assistance and further instructions.