

**HYDRALLOY® C**

GfE Art. No. 2019929 / 2005169 / 2004732

**Application**

The trademark "Hydralloy" describes a group of alloys which are capable to absorb Hydrogen from the gas phase at low temperatures and gas pressures and to form reversible metal hydrides.

Therefore, these materials are considered as suitable candidates for the storage of hydrogen e.g. in fuel cell systems.

The Hydralloy® C group is a low temperature AB<sub>2</sub> type hydride alloy for applications at ambient temperature.

**Production Method**

Vacuum induction melting

**Density**

approx. 6.3 kg/dm<sup>3</sup>

**Available sizes of Hydralloy® C5:**

0 - 2 mm (GfE Art. No. 2019929)

0 - 10 mm (GfE Art. No. 2005169)

2 - 10 mm (GfE Art. No. 2004732)

Allowance for under-/oversize up to 5%.

**Tap Density**

approx. 3.5 kg/dm<sup>3</sup>

*(as rough order of magnitude)*

**Pouring Density**

approx. 3.1 kg/dm<sup>3</sup>

*(as rough order of magnitude)*

**Packaging**

In sealed steel drums

**Chemical Analysis in wt%**

Ti + Zr 25 - 35

Mn 45 - 55

V + Fe 15 - 20

Further possible alloying elements:  
Cr, Ni

**Typical Properties of the C5 Hydride:**

Mid plateau pressure of absorption:  
approx. 10 - 15 bar @ 20 °C

Mid plateau pressure of desorption:  
approx. 5 - 10 bar @ 20 °C

Maximum storage capacity:  
approx. 1.8 wt% @ 20 °C

Filling (charging) pressure:  
15 – 25 bar @ 20 °C  
(for rapid filling cooling is recommended)

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