



Wallex® 20/1040:

A Cobalt-Based Casting Alloy with Excellent Resistance to Erosion and Cavitation.



Wallex® 20-1040 Valves Food Industry

Description:

Wallex® 20/1040 is a cobalt-based alloy, which has excellent anti-galling properties and resistance to erosion and cavitation. The cast alloy has a hardness of **Rockwell C 49 – 59**.

Applications for the Glass Container Industry include:

- Valve Seats
- Plugs
- Stem Guides
- Bearings
- Shafts

Nominal Composition - % by Weight:

Co	Cr	C	W	Others
Bal	31.0	2.0	16.0	Ni, Fe, Si, Mo

Forms Available:

- Centrifugal Cast
- Investment Casting
- Sand

Physical Properties:

Table 1: Physical Properties (approximate)

Density	8.2 g/cm ³
Solidus	1283°C
Liquidus	1395°C

Table 2: Mean Coefficient of Thermal Expansion

Temp °C	Per / °C x 10 ⁶
20 - 100	11.3
20 - 200	12.9
20 - 400	13.6
20 - 700	14.7
20 - 900	15.5

Table 3: Hot Hardness / Rockwell C

Hot Hardness °C	Rockwell C
20	40
400	37
500	33
600	31.5
700	30.5
800	18.5

Safety:

When handling powders do so in such a way to avoid creating a dust cloud; avoid inhalation or contact with skin or eyes. Conduct coating operations in a properly ventilated area. For more information, consult 11.8 (Ventilation), *AWS Thermal Spraying: Practice, Theory, and Application* available from American Welding Society, OSHA Safety and Health Standards available from U.S. Government Printing Office, and the manufacturer's Material Safety Data Sheet (MSDS).

Storage Requirements:

Keep powders in a closed container and protect against moisture pick-up. The containers should be tumbled before using the powder. If moisture is adsorbed from the atmosphere, it can be removed and flowability can be restored by drying the powder, with the seal removed and lid loosened, at 66-93°C (150-200°F) for two hours prior to use.

The information provided herein is given as a guideline to follow. It is the responsibility of the end user to establish the process information most suitable for their specific application(s).

Wall Colmonoy Limited (UK) assumes no responsibility for failure due to misuse or improper application of this product, or for any incidental damages arising out of the use of this material.

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