METALLİC POWDER – ERMAK CoCr-2

Element	Mass (%)
Cobalt	Balance
Chromium	27.00 to 30.00
Molybdenum	5.00 to 7.00
Manganese	< 1.00
Silicon	< 1.00
Iron	< 0.75
Nickel	< 0.50
Nitrogen	< 0.25
Tungsten	< 0.20
Aluminium	< 0.10
Oxygen	< 0.10
Titanium	< 0.10
Carbon	< 0.05
Each Other max.	< 0.04

Heat Treatment Process

1. Heat the furnace from room temperature to 400 °C in 40 minutes.

2. Hold at 400 °C temperature for 15 minutes.

3. Heat the furnace to 920 °C in 40 minutes.

4. Hold at 920 °C temperature for 15 minutes (holding temperature and time tolerance inside the box: 920 °C +/- 10 °C, 60 minutes +/- 20 minutes).

5. Switch off the heating.

6. When temperature has dropped down to approx. 600 °C, open the furnace door.

7. When the furnace has cooled down to approx. 300 °C shut down the argon flow.

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METALLİC POWDER – ERMAK Ti64-1

ELEMENTS	Mass (%)
Carbon (max)	0.08
Oxygen (max)	0.20
Nitrogen (max)	0.05
Hydrogen (max)	0.015
Iron (max)	0.40
Aluminum range	5.5 - 6.75
Vanadium range	3.5 - 4.5
Titanium	Balance
Other Elements (max-each)	0.1
Other Elements (max-total)	0.4

Heat Treatment Process

1. Heat the furnace from room temperature to 843 °C in 4 hours with Argon gas atmosphere.

2. Hold at 400 °C temperature for 2 hours with Argon atmosphere.

3. Cool the furnace to 550 °C in 6 hours with Argon atmosphere .

4. When temperature has dropped down to approx. 550 °C, open the furnace door.

5. When the furnace has cooled down to approx. 550 °C shut down the argon flow.

6. Switch off the heating.

7. Cool the furnace to 25 °C in 4 hours with Air atmosphere .

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METALLİC POWDER – ERMAK S316 L-1

Element	Mass (%)
Iron	Balance
Chromium	16.00 to 18.00
Nickel	10.00 to 14.00
Molybdenum	2.00 to 3.00
Manganese	≤ 2.00
Silicon	≤ 1.00
Nitrogen	≤ 0.10
Oxygen	≤ 0.10
Phosphorus	≤ 0.045
Carbon	≤ 0.03
Sulphur	≤ 0.03

Heat Treatment Process

1. Heat the furnace from room temperature to 1050/1120 °C with Nitrogen gas atmosphere.

2. Fast cool the furnace with Nitrogen atmosphere .

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