ROVALMA

THE STEEL INNOVATOR

FECRONI®-1000

Pre-hardened Stainless Steel for Plastic Injection Moulding

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FECRONI®-1000

FECRONI®-1000 is a pre-hardened corrosion resistant martensitic tool steel with increased Chromium content for improved corrosion resistance supplied at a typical hardness of 280-325 HB. FECRONI®1000 features good machinability, polishability, toughness, heat and wear resistance. This grade is often used for molds processing chemically aggressive plastics or corrosive resins like PVC. Use in supply conditions. Coatings can be applied – for detailed information please contact ROVALMA S.A.

For applications requiring still further ease in machinability, FECRONI®-1000S is also available.

Applications

- Tool, die and mold construction – plastic injection molding, blow molding, plastic extrusion
- Molds for injecting thermoplastics or corrosive chemical resins such as PVC, urea.
- Dies for PVC profiles or other plastics
- Machinery components such as shafts, valves, pistons, nozzles, spindles, amongst many others
- Food processing industry

Physical and Mechanical Properties

Properties	293 K	Unit
Density	7.71	g/cm^3
Mechanical Resistence	950	MPa
Elastic Modulus	210	GPa

The values given in the tables above are typical values (neither maximum nor minimum values for typical supply hardness of 280 +/- 325 HB).

Thermal Properties

Properties	293 K	373 K	573 K	673 K	Unit
Linear Thermal Expansion Coefficient		10.7	11.3	11.7	$x\ 10^{-6}/K$
Thermal Conductivity	17		21		W/m·K
Specific Heat Capacity	430	455			J/g·K

The values given in the tables above are typical values (neither maximum nor minimum values) for typical supply hardness of 280 +/- 325 HB. Thermal conductivity values are calculated on the basis of thermal diffusivity values measured by laser flash.

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Stress Relieving Guidelines

We recommend stress-relieving annealing for workpieces after rough machining, in particular for complex geometries and severely machined pieces.

- Slow heating until the core reaches the temperature of 650 ºC
- Hold for 2-4 hours
- Slow cooling inside the furnace.

Surface Treatments

Surface treatments such as nitriding to increase friction or wear resistance can be applied.
For further detailed information, please contact ROVALMA S.A.

Application Engineering Service

In order to fully exploit the advantages and the potentials of ROVALMA's High Performance Tool Steels, we offer our customers the support of our Application Engineering Service. Our highly qualified and dedicated engineers can assist you in selecting the optimized grade for your application and provide you with the corresponding technical recommendations. It is our mission to increase the competitive-advantage of our customers and support them in achieving the highest possible cost-effectiveness.

You can access our service directly by sending an email to: ae-fast@rovalma.com.

Note

ROVALMA, S.A. carries out ongoing research for many applications regarding the usage of the materials here presented. This research often brings along significant advances in the knowledge of a given process and thus important information regarding the best possible usage of the materials for a specific application. We strongly recommend to get in contact with ROVALMA, S.A. for the latest information regarding a specific application.

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