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8740 nickel-chromium-molybdenum steel

Hardenable alloy steel | Mozaic Precision Metals technical reference

Through-hardening strength and toughness depend on quench/temper.

GRADE / PRODUCT SELECTION

REFERENCE FIELD	SPECIFICATION / BUYER INFORMATION
Material / product	8740 nickel-chromium-molybdenum steel
Alloy or product family	Hardenable alloy steel
Chemical / material identity	SAE 8740 Ni-Cr-Mo alloy, higher carbon than carburizing 8620
Selection consideration	Through-hardening strength and toughness depend on quench/temper
Condition / temper	Specify annealed, normalized or heat-treated conditions and diameter
Reference standard to verify	SAE J404 and ASTM A29 for bar as specified
Typical applications	High-strength bolts, shafts, machined pins
Limits / cautions	Do not interchange 8740 with 4140 solely due to similar strength targets

RELATED MATERIAL CONSIDERATIONS

Compare 4340 for Ni-Cr-Mo alternatives.

ORDERING & PROCESSING REQUIREMENTS

Specify the exact grade/product standard, condition, dimensions, quantity, surface finish, straightness and required certification. Specify annealed, normalized or heat-treated conditions and diameter.

SOURCING & QUALITY NOTE

Mozaic reviews precision grinding, straightening, polishing, cutting and packaging to order-specific requirements. Numeric strength, chemistry and condition limits must be checked against the applicable specification and actual mill test report.

Reference starting point: SAE J403: Chemical Compositions of SAE Carbon Steels

Material page: https://mozaicprecision.com/material/8740-steel/

General reference: not a mill test report, certified analysis, stock guarantee or design approval.