



Product Bulletin

GULF SUPER QUENCH 70

Gulf Super Quench 70 is a fast-speed quenching oil formulated to optimize heat resistance using quality paraffinic base oils and unique *PENN-GRADE™* resins. Conventional quenching oils do not wet the smooth, shiny surface, however, **Gulf Super Quench 70** is formulated to adhere to the surface, thus preserving the bright finish and result in more even cooling.

FEATURES AND BENEFITS:

Gulf Super Quench 70 provides outstanding stability in its resistance to the oxidation effects of quenching operations. It reduces sludge forming tendencies thereby enhancing the oil's ability to continuously produce clean, bright-finished parts. It exhibits excellent thermal stability, retaining its original viscosity in normal service. Additionally this product minimizes cracking and distortions through controlled cooling, requires no additive replacement, and its high flash point helps minimize fire hazards.

APPLICATIONS:

Gulf Super Quench 70 is recommended for use when deeper and more uniform hardening is required in steels having small grain size or wide variations in grain size, in steels lean in alloy content, when minimum distortion is required in high hardenability steels, or in parts having odd shapes or variable sections. It is ideally suited for use when parts must retain a bright finish. Such parts are usually heat treated under a protective atmosphere.

AVAILABILITY:

Gulf Super Quench 70 is available throughout Gulf's marketing area. Your Gulf representative or Gulf jobber can provide specific information. Need additional Information? Call Gulf @ 1-800-566-GULF (4853).



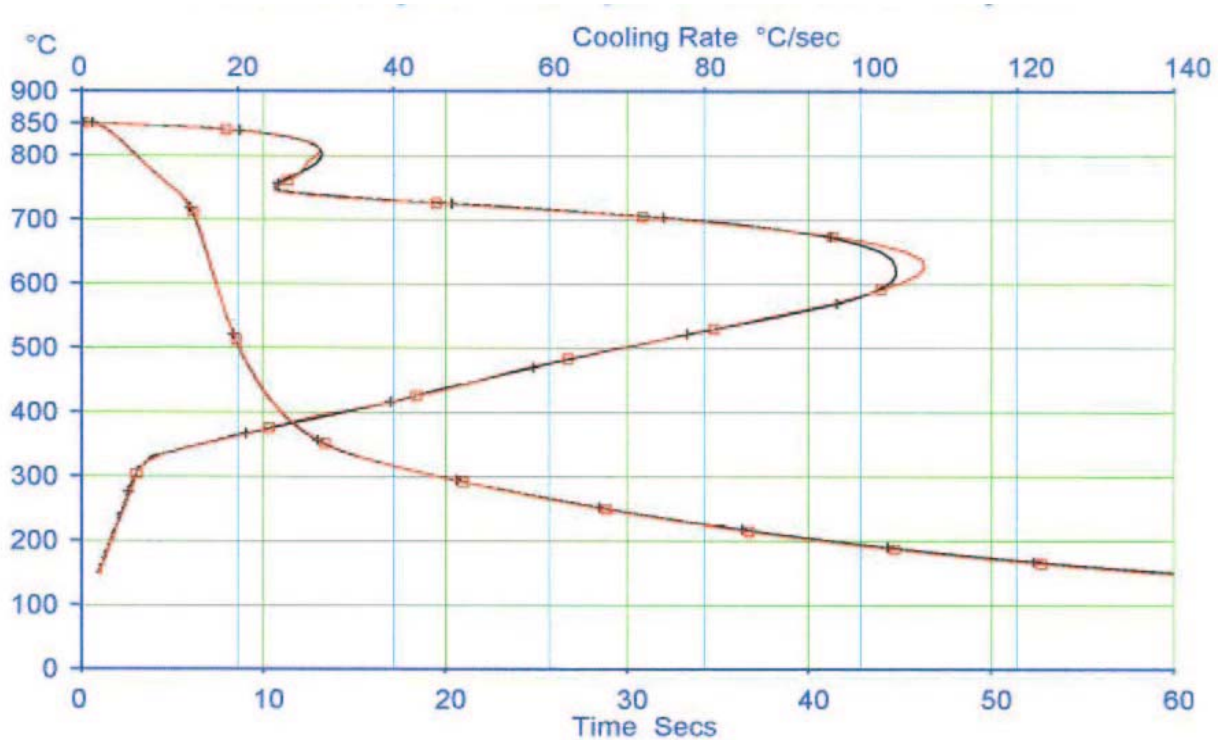
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Gulf Super Quench 70 - Typical Properties

Product Characteristics	Test Method	Product Code: 336261
Viscosity, cSt @ 40°C	ASTM D-445	14.5
Viscosity, SUS @ 100°F	ASTM D-2161	75.5
Color	ASTM D-1500	Opaque
Pour Point, °F (°C)	ASTM D-97	-10 (-24)
Flash Point, COC, °F (°C)	ASTM D-92	375 (190)
Conradson Carbon Residue, %	ASTM D-189	0.54
GM Magnetic Quenchometer Method, sec	ASTM D-3520	10.4
API Gravity, 60°F	ASTM D-1298	34.6
Density, lbs/gal (g/L)	Calculated	7.11 (852)

Gulf Super Quench 70 – Quenchalyzer Data



Maximum Cooling Rate, °C/sec	ASTM D-6200	106.4
Temperature at Maximum Cooling Rate, °C	ASTM D-6200	620
Cooling Rate at 300°C, °C/sec	ASTM D-6200	6.90
Time to reach 600°C, sec	ASTM D-6200	7.4
Time to reach 400°C, sec	ASTM D-6200	10.9
Time to reach 200°C, sec	ASTM D-6200	40.8

Note: The cooling curve, cooling rate curve, and associated cooling characteristic data shown above were generated in accordance with ASTM D-6200.