



Product Data Sheet

Super-Quench® AO

Designed for controlled, rapid cooling of heat-treated steel

Outstanding stability in quenching operations. It reduces sludge forming tendencies, enhancing the oil's ability to continuously produce clean, bright-finished parts. **Super Quench AO** exhibits excellent thermal stability, resisting changes in 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.

Features and Benefits

- Outstanding stability in quenching operations
- Bright-finished parts

- Reduces sludge forming tendencies
- Requires no additive replacement

Applications

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.

Typical Properties

Properties	Test Method	Gulf Super Quench AO
Product Code		336260
Viscosity, cSt @ 40°C	ASTM D-445	16.0
Appearance		Dark
Pour Point, °F (°C)	ASTM D-97	-6 (-21)
Flash Point, COC, °F (°C)	ASTM D-92	360 (182)
GM Quenchometer, Sec (1)*	ASTM D-3520*	10.0 – 12.0

^{*}Note: (1) ASTM D-3520 is obsolete. Value shown is for reference only; using nickel ball.

These cooling rates and quench times are typical of current production. While future formulations will conform to Gulf specifications, variation in these typical properties may occur. Used oil values will vary from typical new oil values.

Typical Quenchalizer (ASTM D-6200) Data

Maximum Cooling Rate, °F/sec, °F	193
Temperature at Maximum Cooling Rate, °C	630
Cooling Rate at 600°F, °F/sec	15
Time to reach 600°C, sec	7
Time to reach 400°C, sec	11
Time to reach 200°C, sec	41

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