

UCON™ QUENCHANT B

POLYMERIC QUENCHANT

▷ PRODUCT DESCRIPTION

UCON™ Quenchant B is an aqueous solution of a liquid organic polymer and corrosion inhibitors. The organic polymer used in UCON Quenchant B is inversely soluble in water. At ambient temperatures, the polymer is completely soluble in water and produces clear homogeneous solutions. At temperatures above 165°F (74°C); however, the polymer separates from water as an insoluble phase.

When hot metal is quenched in a diluted solution of UCON Quenchant B, a film of the liquid organic polymer is deposited on the surface of the hot metal. The rate at which the metal is cooled is governed, in part, by the thickness of the polymer-rich film. The thickness of this film is controlled by the concentration of UCON Quenchant B in the quench bath.

The cooling rate is controlled also by adjusting the quench bath temperature and/or the rate of agitation. The main difference between UCON Quenchant B and other UCON Quenchants is its higher molecular weight, which provides uniform heat transfer in the range of medium speed oils to slow oils.

▷ FEATURED BENEFITS

- Opportunity is presented for reduced costs of protection equipment and/or fire insurance
- Produces slow “C” phase cooling due to its higher molecular weight ingredient. The major make-up requirement is for water lost by evaporation
- Eliminates the smoke, soot, and residues common to oil quenchants. Equipment maintenance and plant cleanliness are easier to achieve.
- Fully soluble in water. Resistant to bacterial growth, exhibits low Biochemical Oxygen Demand (BOD), and is essentially non-toxic to bluegill sunfish

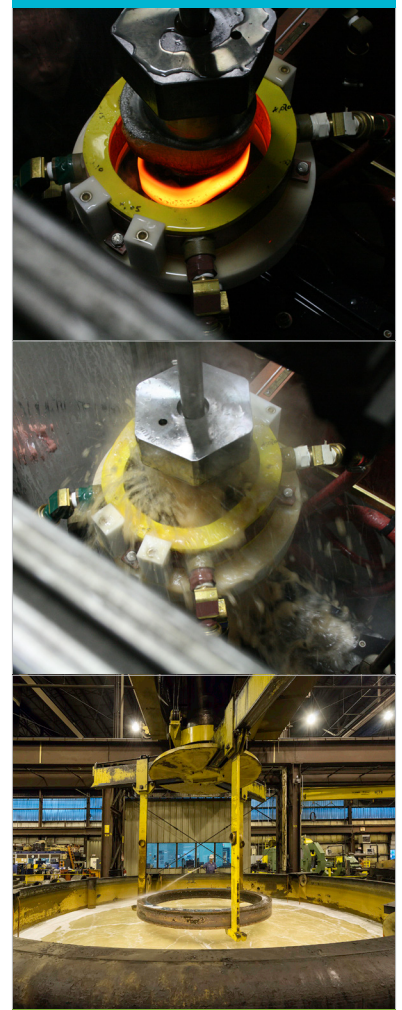
▷ PRODUCT APPLICATION

- UCON Quenchant B is used for carbon steel through 1095 grade alloy steels of most grades, including 400 series stainless steels.
- UCON Quenchant B is readily adapted to induction hardening, both spray quench and immersion, for such items as gears, crankshafts, camshafts, and other pieces of intricate geometry and different metallurgy.
- UCON Quenchant B may follow either oxidizing or protective atmosphere furnaces of shaker, rotary or continuous design. It may be used for direct quenching from the forge, for continuous cast quenching, and for general hardening of forged and cast steels and cast irons.

▷ APPROVALS

- Approved by Factory Mutual Research Corporation as a “less-hazardous” quenchant

APPLICATION





TYPICAL PROPERTIES

Weight, 68°F (20°C)	8.96 lbs/gal.
Specific Gravity, 68°F (20°C)	1.077
Flash Point	None
Pour Point	32°F (0°C)
Rust Inhibition, ASTM D 665A	Pass
Viscosity, 100°F	1,450 SUS
Refractometer Multiplier (IFT 40/ATAGO PAL-1)	2.7/2.5

PRODUCT CODE

1423600000

HEALTH AND SAFETY

For health and safety guidance, please refer to the Chemtool SDS (Safety Data Sheets).