



POWER QUENCH C 70 is compounded mineral quenching Oil made from refined paraffin based oils with selected additives as speed improvers.

GENERAL :

The Time-Temperature Curve provides an ideal case to understand **Power Quench C - 70**, the ideal quenching media is one which has a lower 'A' stage i.e. Vapour blanket phase, a faster 'B' stage i.e. boiling phase and a very slow 'C' stage i.e. a convection phase.

Looking into the above statement, a good quenching media would be a fluid which has very little Vapour phase and possess a high initial quenching speed of water to induce maximum hardness in the workpiece, yet not continues to cool on rapidly as water, once the critical transformation temperature is passed. At this point, the ideal fluid would behave or would take the properties of conventional oil and would impart a gradual and much slower cooling rate. Thus, eliminating the possibility of undue stresses and metal distortion. In this 3rd phase, the cooling takes place by conduction and convection. No such ideal quenchant exist. However, though oil base, **Power Quench C - 70** tries itself to be nearer to the said concept.

Power Quench C-70 has been developed to approach as close as possible, the high initial quenching speed of water, without sacrificing the advantage of conventional quenching oils. The slow cooling in the final stages of quenching, helps in controlling/reducing the distortion, as the initial stages provides the requisite hardness.

This highly refined quenching oil alongwith has a considerably less 'A' stage and a fast 'B' stage, thereby the process of quenching becomes faster and sooner than the conventional oil and very slow or similar to the conventional oil in 'C' stage. This unique property of **Power Quench C - 70** results in deeper, more uniform hardening of steel parts with minimum distortion and cracking.

PROPERTIES :

Viscosity at 40°C; cSt	15 - 23
Flash point (COC°C)	190 (TYPICAL)
GM quenchemeter speed	10 - 12 secs

APPLICATION :

Power Quench C - 70 is the ideal quenching oil, where deeper and more uniform hardness is required i.e. for small grain size or wide variation in grain size, in leaner alloy steels and for parts having variable section or odd shapes. It is also ideal quenchant for use wherein minimum distortion in required in high hardenability steels.

It is also recommended for use, when parts are required to retain a bright finish. Such parts are usually heat treated under protective atmosphere.

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