



# Parquench 60

## *Aqueous Polymer Quenchant*

### DESCRIPTION:

**PARQUENCH® 60** is a water solution of an organic polymer with a nitrite containing corrosion inhibitor. It is low foaming and has increased resistance to bacterial contamination. The polymer has normal solubility. Consequently, the temperature of use is only limited by the boiling point of water. During quenching in **PARQUENCH® 60** solution, the polymer deposits on the surface of the hot metal, thus controlling the heat transfer from the metal to the quenchant. The concentration, temperature, degree of agitation and the time of quenching in the **PARQUENCH® 60** solution will determine the manner and rate of the quenching process.

**PARQUENCH® 60** is faster than other synthetic quenchant in the upper temperature cooling range, and slower in the convection stage, giving higher hardness and more freedom from cracking. Generally, **PARQUENCH® 60** should be used for steels having a hardenability equal to or less than that of AISI-4140 steel.

### TYPICAL PROPERTIES:

Appearance:	Clear liquid
Viscosity at 40°C:	16 cSt
Freezing Point:	-4 °C
Solubility:	Soluble in water (all proportions)
Specific Gravity:	1.03
pH:	> 9.0
Refractometer Factor:	7 . 9

### USE INSTRUCTIONS:

Concentration:	1 – 30% by
Temperature:	Ambient – 60 °C
Agitation:	≥ 0.5 m/s recommended
Time:	As required for appropriate Metallurgical transformation

### MATERIAL COMPATIBILITY:

All equipment for **Parquench 60** baths may be constructed of mild steel.

### CONCENTRATION CONTROL:

#### Shell Cup Test Method (Shell Cup #1)

1. Submerge the cup in the 80°F sediment and air free solution. Allow approximately 30 seconds for the cup to attain sample temperature.
2. Lift the cup vertically out of the solution, starting the stopwatch as the bottom of the cup breaks the surface.
3. Record the time required for the cup to empty, stopping the watch when the stream first breaks.
4. Read concentration from the plot of time (seconds) versus percent by volume concentration.

### CORROSION CONTROL:

If for any reason the existing corrosion inhibitor in the quenchant does not provide adequate protection, the addition of a small amount of **RUST INHIBITOR SQ** will reinforce the anticorrosion activity, without interfering with the quenching mechanism of the polymer solution.

**RUST INHIBITOR SQ** is solid and readily soluble in warm water. It is added to the quenching solution at a concentration of .1 - .5% (by weight) to provide a working pH of greater than 8.

### SAFE HANDLING & STORAGE CONDITIONS:

Use **PARQUENCH® 60** with adequate ventilation. Read the current Safety Data Sheet thoroughly before using this product.

**DISPOSAL:**

Any disposal of this product should be in compliance with all federal, state, and local regulations. Please refer to the Safety Data Sheet (SDS) for instructions regarding proper disposal of this product.

**PRECAUTIONS:**

KEEP OUT OF THE REACH OF CHILDREN.

Please refer to the label and Safety Data Sheet (SDS) for all warnings, recommendations for safety equipment, and other regulatory information. Copies of the SDS can be ordered by calling 800-438-2647.



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TIME VS. CONCENTRATION

NO. 1 SHELL CUP AT 80 F

