

## Castrol Iloquench 700 Aqua

Water Soluble Polymer Quenchant

### Description

Castrol Iloquench™ 700 Aqua is a polymer quenchant for induction hardening of steel and cast iron. It is an aqueous solution of synthetic water-soluble polymers of high molecular weights plus an antifoam agent and nitrite free corrosion inhibitors.

### Application

Iloquench 700 Aqua has been developed for quenching of steel components in induction or flame hardening applications to reduce the occurrence of warping or cracks. Typical components treated are crankshafts, gears, axles, transmission shafts, saw blades, rolling mill cylinders, rocker arms and push rods.

Iloquench 700 Aqua offers a rate of quench which is intermediate between water and mineral oil based quenchants, which can be varied by altering the concentration.

### Conditions of Use

Temperature of bath:	20 - 45 °C
Typical concentrations:	- Carbon steel and low alloy steel      5 - 10%
	- Medium alloy steel                              10 - 15%
	- High alloy steel                                    15 - 25%

The quenching result is affected by many parameters, such as the metal alloy and the geometry of the part, the required depth of effective quenching and the method of application. It is recommended to perform preliminary tests on the unit under consideration for optimising the process parameters.

### Advantages

- Non-flammability of quenching bath, reduce the risk of fire hazards
- Excellent in-process corrosion protection
- Low foaming
- Improved conditions of work - offers considerable reduction and in some cases elimination of deposits on handling machines and quenched work
- Improved cleanliness of components as the quenchant is water based and easily removed
- Reduced drag out and residue formation

## Typical Characteristics

Description	Test Method	Unit	Value
Appearance	Visual	-	Clear light yellow to light amber liquid
Density @ 15 °C	ASTM D4052	g/ml	1.06
pH (15% in Distilled Water)	ASTM E70-97	-	9.6
Kinematic Viscosity @ 40 °C	ASTM D445	mm <sup>2</sup> /s	85
Cast Iron Corrosion (5% in Distilled Water)	IP 287	-	No stains
Refractometer factor (in Distilled Water)	-	-	2.6

Subject to usual manufacturing tolerances.

## Storage

To avoid product deterioration always keep the container/drum tightly sealed. Store the product in a cool, dry place away from direct sunlight. Prevent exposure to frost and avoid water ingress. For optimum product stability, it is preferable to store the product indoors between 5°C and 45 °C / 41°F and 113°F.

For more details, please refer the product safety data sheet.

Castrol Iloquench 700 Aqua

08 Jan 2018

Castrol, the Castrol logo and related marks are trademarks of Castrol Limited, used under licence.

This data sheet and the information it contains is believed to be accurate as of the date of printing. However, no warranty or representation, express or implied, is made as to its accuracy or completeness. Data provided is based on standard tests under laboratory conditions and is given as a guide only. Users are advised to ensure that they refer to the latest version of this data sheet. It is the responsibility of the user to evaluate and use products safely, to assess suitability for the intended application and to comply with all applicable laws and regulations. Material Safety Data Sheets are available for all our products and should be consulted for appropriate information regarding storage, safe handling, and disposal of the product. No responsibility is taken by either BP plc or its subsidiaries for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from hazards inherent in the nature of the material. All products, services and information supplied are provided under our standard conditions of sale. You should consult our local representative if you require any further information.

Castrol Industrial, Technology Centre , Whitchurch Hill , Pangbourne , Reading , RG8 7QR , United Kingdom

<http://msdspds.castrol.com>