Shell VOLUTA® C 400

Neat Quenching Oil

Shell VOLUTA® C 400 is recommended for cold quenching and should be used to quench steel with poor ability to harden

Performance Features and Benefits

- High speed quenching
- Low viscosity

Main Applications

Shell VOLUTA® C 400 is recommended for conventional quenching of steel with poor ability quenching alloys steels, in cold quenching operation. The low viscosity makes it suitable for quenching of small pieces where drag-out has to be reduced. The lifetime of the quenching oil depends on the control of temperature. Make sure that the heating components, the cooling and agitation systems all work properly.

Advice on applications not covered in this handbook may be obtained from your Shell representative.

Storage Requirements

The product should be stored inside (5-40°C) no more than 2 years and be protected from freezing.

Handling and Safety Information

For information on the safe handling, storage, or use of this product, refer to its Material Safety Data Sheet at http://www.epc.shell.com/. If you are a Shell Distributor, please call 1+800-332-6457 for all of your service needs. All other customers please call 1+800-237-8645 for all of your service needs.

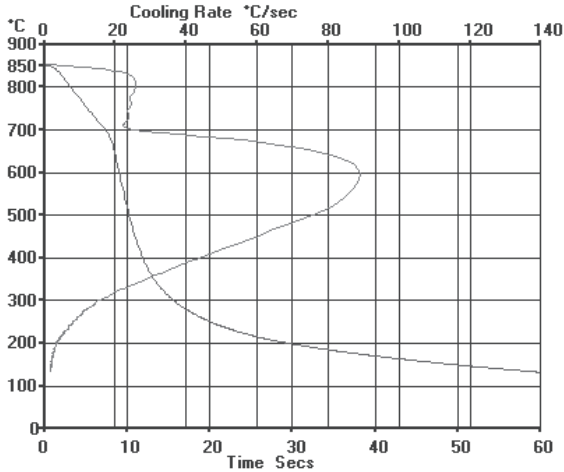
Protect the Environment

Do not discharge into drains, soil, or water.

Typical Physical Characteristics

	Method	Shell VOLUTA® C 400
Appearance		Light Yellow
Density @ 20°C, kg/L	ASTM D 4052	0.870
Kinematic Viscosity		
@ 40°C, cSt	ASTM D 445	23.9
@ 100°C, cSt		4.3
Flash Point COC, °C	ASTM D 92	206
Quenching parameters @ 40 °C	(ISO 9950)	
Vr Maximum cooling rate (°C/s)	Inconel Probe	89
qVr Temperature at maximum cooling rate (°C)		595.6
Vr @ 300°C cooling rate at 300°C (°C/s)		15.1
Time to reach 600°C		9.0
Time to reach 400°C		11.875
Time to reach 200°C		29.50

These characteristics are typical of current production. While future production will conform to Shell specifications, variation in these characteristics may occur.



INCONEL PROBE
Oil temperature : 40°C