

Shell VOLUTA® C 302

Neat Quenching Oil

Shell VOLUTA® C 302 is recommended for cold quenching and should be used to quench easy to hard alloyed steels.

Performance Features and Benefits

- Low aromatic components
- Low viscosity
- High speed quenching
- High refined base oil

Main Applications

Shell VOLUTA® C 302 is recommended for conventional quenching of poor ability quenching alloys steels (35CD4, 42CD4 and 100C6 as ex.) 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 the temperature. Make sure that the heating components, the cooling and agitation systems all work properly.

Shell VOLUTA® C 302 can be used after salt bath, after carbonitriding or cementation.

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.

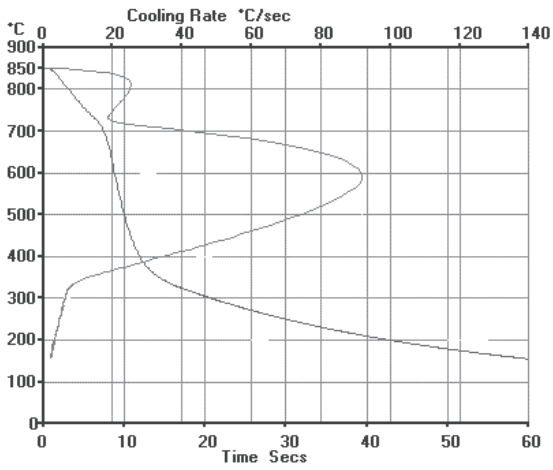
Protect the Environment

Do not discharge into drains, soil, or water.

Typical Physical Characteristics

	Method	Shell VOLUTA® C 302
Appearance		Black Liquid
Density @ 15°C, kg/L	ASTM D 4052	0.869
Kinematic Viscosity @ 40°C, cSt @ 100°C, cSt	ASTM D 445	20.6 4.1
Flash Point COC, °C	ASTM D 92	177
Quenching parameters @ 40 °C Vr Maximum cooling rate (°C/s) qVr Temperature at maximum cooling rate (°C) Vr @ 300°C cooling rate at 300°C (°C/s) Time to reach 600°C Time to reach 400°C Time to reach 200°C	(ISO 9950) Inconel Probe	91.89 596.61 6.35 8.75 11.875 42.750

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