

AQUA-QUENCH® 251

Synthetic Polymer Quenchant (P.A.G.) Type II

DESCRIPTION

AQUA-QUENCH 251 is a polyalkylene glycol (P.A.G) Type II polymer quenchant. When mixed with water, **AQUA-QUENCH 251** will provide a quenching rate that gives uniform quenching without smoke or fire.

Thousands of tonnes of forgings, rod, machined and formed steel components have been quenched using **AQUA-QUENCH 251** polymer solutions.

AQUA-QUENCH 251 lets you control the quenching speed to your needs by simply adjusting the concentration, agitation and temperature to suit particular requirements.

AQUA-QUENCH 251 is used in place of mineral based quenching oils to prevent smoke and fire in critical situations. By changing the concentration of **AQUA-QUENCH 251**, different quench speeds can be achieved. Variable quenching speeds can be obtained by changing the concentration and or the temperature of the quenchant.

For example, to replace 9 - 11 seconds G.M. Quenchometer speed oil, if quenchant temperature held at 20°C, approximately 20% by volume **AQUA-QUENCH 251** mixed with water would be needed for the same agitation conditions.

If quenchant temperature is controlled at 40°C approximately 15% **AQUA-QUENCH 251** would be needed.

TYPICAL VALUES

Product Appearance	Amber Hazy Fluid
Emulsion Appearance @5%	Translucent White
pH @Neat	9.5
Specific Gravity @15°C	1.080 kg/L
Brix Concentration Factor	2.35
Corrosion Properties	Excellent
Viscosity @40°C	280 cSt
Solubility in water	Inverse soluble above 77°C

01 July 2011 Version 1.0, Code: AQQ 251

FEATURES

- No fires, no fumes, no mess.
- Uniform hardening
- Adjustable cooling rate
- Easy wash off properties
- Can replace oil quench
- Complies with AMS 3025B/2

HEALTH AND SAFETY

Refer to MSDS for proper handling and disposal. Please note that the MSDS includes handling, health and disposal information which should be passed on to your employees, and to anyone else who comes in contact with our product. Additional advice can also be obtained from your local Houghton representative.

NOTE: Read and understand all precautions on container labels before using this product.



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This document contains information based on data that is believed to be correct. However, the product may not be applicable to all uses and operating environments. No warranty or guarantee is expressed or implied.

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REFERENCES

AQUA-QUENCH 251 complies with AMS 3025B Type II

AQUA-QUENCH 251 is controlled in use by C.A.T.

C: Concentration

A: Agitation

T: Temperature

As the control temperature of the quenching bath increases, with the same concentration of **AQUA-QUENCH 251** the cooling speed will slow down. Increased agitation will markedly increase cooling speed.

HOW TO USE

The recommended usage concentration of **AQUA-QUENCH 251** may be customised to suit individual needs or solutions, which may vary from time to time.

Concentration by Volume	Viscosity @40°C
5.0	1.2 cSt
10.0	1.8 cSt
20.0	4.4 cSt
30.0	8.9 cSt

Houghton strongly advises that you contact your Sales Representative to discuss before commencement of use.

SHELFLIFE & AVAILABILITY

Under normal conditions the recommended shelf life for **AQUA-QUENCH 251** is a minimum of Twelve (12) months, unless otherwise specified. The product should be stored inside (5-40°C) for no more than 1 year and be protected from freezing.

AQUA-QUENCH 251 is available in Pail, Drum or Tote. Other sizes may be available upon request, please contact your Houghton sales representative.

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RELATED PRODUCTS

- CUT-MAX: Straight cutting oils
- GARIA: Straight cutting oils
- MACRON: Straight cutting and honing oils
- DASCOLENE: Straight OEM Approved cutting oils
- WIOLAN: Straight honing and grinding oils
- HOCUT: Water miscible metalworking fluids
- DROMUS: Soluble metalworking fluids
- SUPERCUT PLUS: Economical Soluble metalworking fluids
- ADRANA: Water miscible metalworking fluids
- SITALA: Semi-Synthetic metalworking fluids
- METALINA: Synthetic metalworking fluids
- HOUGHTO-GRIND: Straight and water miscible grinding fluids
- HOUGHTO-DRAW: Straight and water miscible drawing stamping and forming fluids.
- CINDOL: Straight and water miscible drawing and forming fluids especially for Aluminium parts.
- CERFA-KLEEN: Water miscible cleaning fluids
- CALLINA: Water miscible cleaning fluids
- RUST VETO: Straight and water miscible rust preventive fluids.
- ENSIS: Straight and water miscible rust preventive fluids.
- HOUGHTO-QUENCH: Cold and warm Quenching oil.
- MAR-TEMP: Hot Martemping oil.
- AQUA-QUENCH: Polymer Quenching Fluids



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