

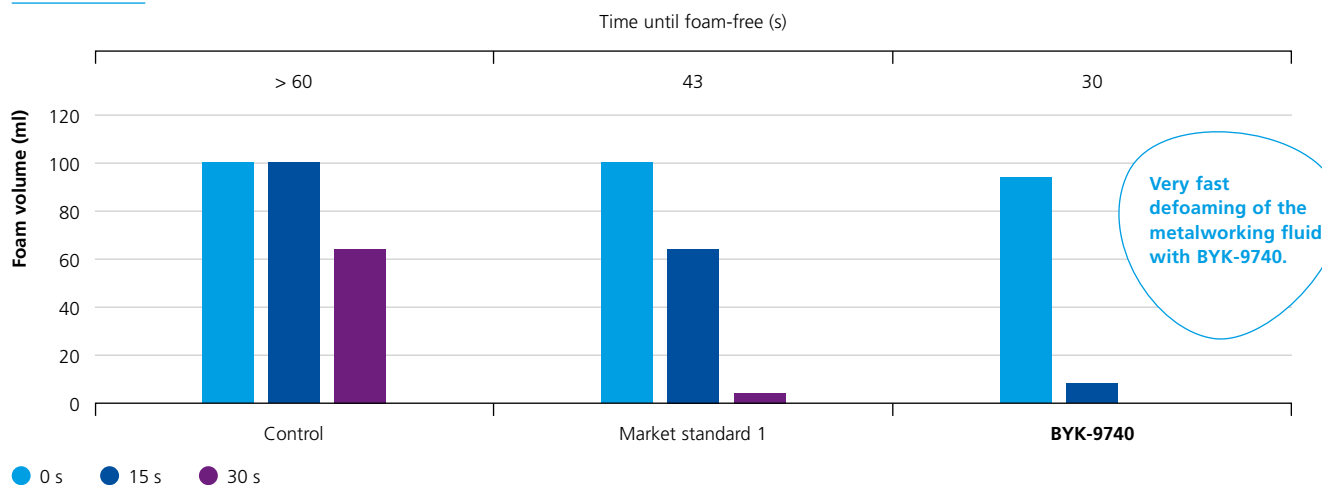
BYK-9740

New silicone- and polymer-containing defoamer for water-based metalworking fluids with excellent spontaneous and long-term defoaming properties

Water-based metalworking fluids are used in the machining of metal parts, e.g. for cutting, forming, or grinding, for cooling, lubricating, and cleaning the workpiece and the metal part. Foaming is a common problem with these systems, which are formulated as concentrates, because they contain emulsifiers and surfactants and are pumped in a recirculation system. The use of a reliable and long-term stable defoamer is therefore essential.

The new BYK-9740 is the first defoamer in BYK's portfolio specifically designed for water-based metalworking fluids. It offers excellent spontaneous and long-term defoaming properties combined with good compatibility. The additive is particularly suitable for systems that contain a certain amount of oil, such as water-soluble and semisynthetic metalworking fluids.

Spontaneous defoaming after shake test in a water-soluble metalworking fluid (naphthenic oil)



Test system: 5 % emulsion of a metalworking fluid concentrate in DI-water **Dosage:** 0.1 % additive (as supplied) based on the concentrate

Test method: 50 ml of the emulsion is poured into a 100 ml cylinder; the cylinder is shaken 20 times in 5 seconds; the foam volume is observed and recorded until the emulsion is foam-free

Benefits

- Excellent spontaneous and long-term defoaming
- Good compatibility in various metalworking fluid concentrates
- No negative influence on paintability
- Easy to incorporate

Areas of application

Especially recommended:

- Water-soluble metalworking fluids
- Semisynthetic metalworking fluids (medium to high oil content)

Recommended:

- Semisynthetic metalworking fluids (low oil content)
- Fully synthetic metalworking fluids

Technical properties

- Emulsion of foam-destroying polymers and polysiloxanes
- Non-volatile matter (150 °C, 10 min): 63 %
- Density (20 °C): 1.03 g/ml
- Viscosity (20 °C): approx. 1000 mPa·s

Compatibility after 7 days storage in a water-soluble metalworking fluid (naphthenic oil)



Dosage: 0.1 % additive (as supplied) based on the concentrate

BYK-9740 shows good compatibility in the metalworking fluid concentrate. Minor turbidity may occur.

Good paintability



Test system: Aqueous anticorrosive primer

Test method: Application of the pure defoamer onto a cold-rolled steel panel (55 µm); rinsing with water; application of primer (25 µm) to check for wetting defects

BYK-9740 shows no negative influence on paintability.

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This issue replaces all previous versions.

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