

WATER QUALITY AND COOLANTS

If you are using a Hangsterfer's coolant concentrate, you can be confident that you are using a product that is far advanced when compared to ordinary coolants on the market. Our products are of high quality and formulated to achieve maximum efficiency in your machining operation. However, the second most important chemical used in a coolant system is the water and we will now cover some important factors in this regard.

The coolant is largely dependent on the water used to maintain the concentration due to the fact that water in most operations makes up more than 90% of the coolant system. It is the 10% or less coolant concentrate that is providing metalcutting lubrication, machine lubrication, rust and corrosion protection and biostability.

To maximize the benefits the coolant provides, we attempt to minimize or eliminate outside influences. Deionization or Reverse Osmosis is a reliable and efficient means to control the influences that poor water quality can impart on the coolant. Water of poor quality over time will negatively affect the coolant's performance, directly reducing tool life, surface finish and increase consumption.

For example, demineralization reduces the amount of minerals that enter the coolant. With mineral containing water, as the water fraction of the coolant evaporates and additional water is added, it increases the amount of minerals in the system. As the water evaporates, the minerals are left behind and condense in the coolant system. These minerals increase the solids content of the coolant, causing a decrease in filter efficiency and an increase in viscosity of the coolant, which results in an increase in consumption of coolant concentrate. The minerals are also conductive which influence the coolant's ability to maintain a stable pH.

Lastly, any foreign contaminants can add to the available food source, which bacteria need to grow. Reduce the food source and the result is lower bacterial levels. As a basic rule, if you cannot drink the water that is intended for use with a water dependent system, water treatment will be required.

Preferred Ranges for Water Quality

Test	Preferred Range
Appearance	Clear
Odor	Nil
pH	6.0 – 8.0
Total Dissolved Solids (TDS)	100 – 400
Conductivity	150 – 600
Hardness as of Calcium Carbonate	50 – 200
Chlorides	0 – 20
Bacteria	0 – 10 ³

Hangsterfer's Laboratories is an **ISO 9001 Certified** facility whose quality products are supported by a quality conscious staff. If you should require assistance using any Hangsterfer products, call us at 1-856-468-0216, e-mail us at sales@hangsterfers.com or visit us on the web at www.hangsterfers.com. REACH Compliant.

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