

Troubleshooting:

Colour Changes in Water-Miscible Coolants

During daily machining discolouration of your water-based coolant can occur, but what is the cause, and does it indicate a problem? We have listed a few possibilities below.

Coolant turns green-blue

If a lot of copper and copper alloys are machined, the emulsion/solution can turn green-blue. This has no negative effect on machining. Nonferrous metal chips should nevertheless be removed from the tank at an early stage if possible.

Coolant turns pink

If carbide and PCD are machined with a water-soluble product that is not suitable for these materials, it may turn pink. This is an indicator of dissolved cobalt, which can be carcinogenic. In this case, the cooling lubricant should be changed immediately. Our water-miscible cooling lubricant AquaTec 5001 is designed for machining carbide.

Coolant turns gray

This occurs mainly when the water-soluble product is replaced. The new coolant has a higher cleaning effect than the older fluid and flushes the lines and pipes of the machine free. This is harmless as long as there is no strong odour, which can indicate bacterial infestation. For this reason, we always recommend performing a system clean before changing the cooling lubricant. Other reasons for a grayish discoloration can be dirt particles and chips, or the machining of graphite can be the cause.

Coolant turns brown

If there is a leak in the machine or on one of the lines, hydraulic oil or slideway oil can get into the water-soluble cooling lubricant. These lubricants consist mainly of mineral oil and are of brown colour. If they contaminate the water or a water-soluble coolant, the oil floats on top and appears as brown layer. The tramp oil should be removed with a tramp oil separator.



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If you are experiencing any changes in colour or odour of your fluids and aren't sure of the cause, it is best to consult with the coolant's manufacturer and consider carrying out an oil test which will determine whether any contaminants are present.

For assistance, please contact our technical team on 01745 814 777