Blaser. SWISSLUBE

When the coolant becomes a Liquid Tool.

Handling and care of water-miscible coolants

liquidtool®
BOOSTS YOUR PRODUCTIVITY

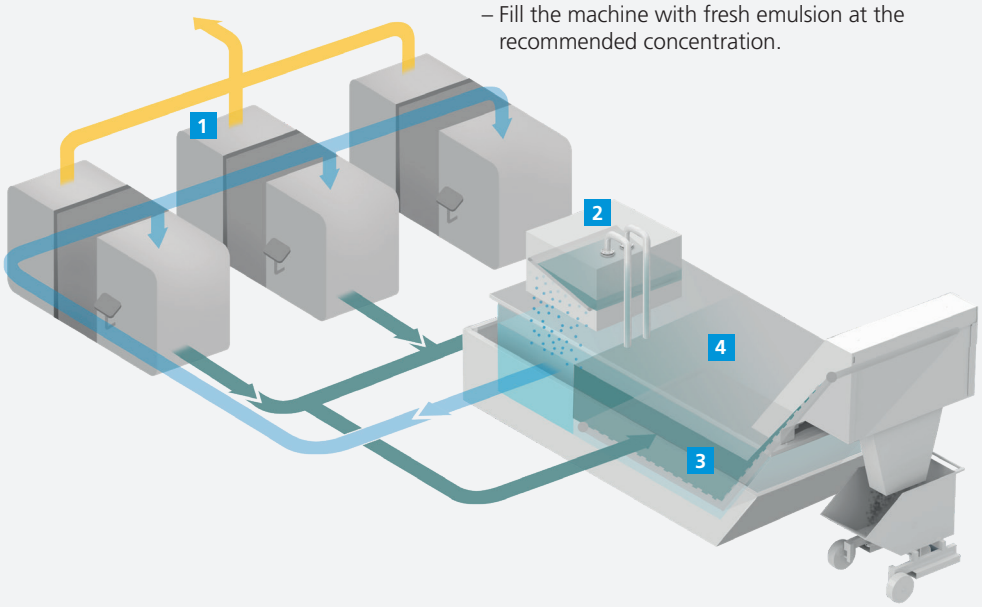
Before filling

First or re-filling

Before filling or re-filling the system, absolute cleanliness is essential. Thoroughly clean the cutting fluid tank and the machine. Ensure to remove all chips, swarf, sludge and other residues.

Proceed as follows

- Add system cleaner to the old emulsion as per the recommended dosage. Then work with this mixture so that the cleaner can circulate around the system.
- Drain the system.
- Clean the machine with a high-pressure spray and rags.
- Remove residual fluid out of the machine for waste disposal.
- Fill the machine with diluted fresh emulsion (at least 1% concentration) to the level required for pump suction intake.
- Let this diluted fresh emulsion circulate for at least 30 minutes. During this time let the chip conveyor work and flush all the nozzles and the internal coolant.
- Remove this emulsion out of the machine for waste disposal.
- Fill the machine with fresh emulsion at the recommended concentration.



Machine/system cleaning

Special attention should be paid to clean the following zones where residues collect in particular:

1. **Suction unit**
2. **Filter**
3. **Chip conveyor**
4. **Cutting fluid tank**

Tip: Regularly flush the machine and use fresh emulsion instead of system cleaner.

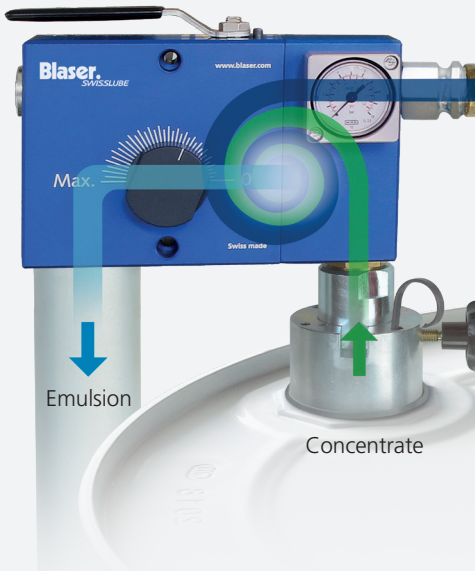
Filling

Water quality

Chloride content

Water hardness

Recommended mixing temperatures



Mixing concentrate and water

Mixing device

Manual mixing

Tip: Never use galvanized piping for adding fresh emulsion. It may cause zinc soap formation.

Measures during operation

Cutting fluid emulsion mainly comprises water. The water quality (chloride content, hardness and pH) varies widely by source, region and country. It has significant effect on cutting fluids, machine parts and components.

Should be as low as possible, no more than 25 mg/l.

Varies according to product. For most Blaser products 5–15° dH water hardness is ideal.

Softer water promotes foaming. This can be avoided with most Blasocut- and some B-Cool-products by adding calcium acetate to harden the water.

If the water is too hard (>15° dH), tapwater can be used for mixing new emulsions, but for daily topping up it is better to use water that is demineralised or treated by reverse osmosis.

Concentrate: min. +10°C / max. +30°C
Water: min. +10°C / max. +30°C

Never mix the existing cutting fluid with any other product.

Important: Never add water alone or pure concentrate to the cutting fluid emulsion.

We recommend using a Jetmix or Mini-Jetmix unit to make a finely dispersed, homogeneous emulsion of cutting fluid concentrate and water.

Slowly add concentrate into a water filled container while stirring continuously until it is completely dispersed (a hand held drill with mixing attachment is suitable for stirring).

Do not use compressed air, a water jet, or any cutting fluid pumping system.

Monitoring

In order to detect adverse developments and rectify them in good time, regularly check the following parameters:

Concentration

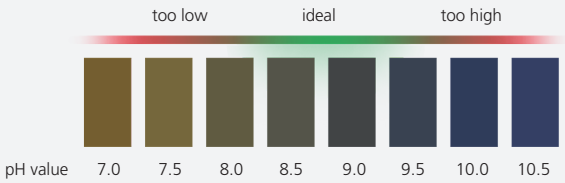
Keep the concentration within the recommended range. This ensures optimally effective cutting fluid for best machining performance, corrosion protection, minimal foaming and long-term stability.

Topping-up frequency

Keep the tank full as far as possible by frequent topping up. This maintains constant emulsion conditions and stable machining.

pH value

The pH value indicates the condition of the cutting fluid during use. If the pH value is above the maximum or below the minimum limit, take corrective measures in good time. We recommend checking the pH value once weekly at least.



Cutting fluid maintenance

A minimal effort for cutting fluid maintenance is a good investment.

Tramp oil removal, filtration

Regularly remove the tramp oil with an Air Skimmy suction unit or a skimmer. Use a good filtration system for emulsion depending upon the process requirement.

Tip: Measuring intervals depend very much on the tank size. Central systems should be checked daily, and individually filled machines on a weekly basis. We recommend keeping a monitoring log of all measurements taken, and can provide you with a template accordingly if desired. Do not hesitate to contact us in case of any unusual changes observed in measurement data.

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Thanks to our specialists and optimised range of equipment and accessories, you can be sure of full satisfaction with Blaser cutting fluids.

Preparation of emulsions and solutions

Jetmix emulsion mixers
The Jetmix is the ideal mixing device for preparing homogeneous and finely dispersed emulsions of cutting fluid concentrate in water. Correct preparation is preconditional for on-going emulsion stability. Capacity at 6 bar water pressure: 1'800 litres/h for Jetmix and 960 litres/h for Mini-Jetmix.

Jetmix for drum mounting	Art. 9275
Conversion set Jetmix drum mounting to wall mounting	Art. 9294
Mini-Jetmix	Art. 9264

Refractometer
For fast and easy measurement of water-miscible cutting fluid concentration.

Art. 9288

Monitoring of emulsions and solutions

Test strips
Test strips for measuring pH value, water hardness and nitrite content.

pH value	Art. 9650
Water hardness	Art. 9651
Nitrite content	Art. 9652

Standard service kit
Standard equipment: Test strips for measuring pH value, water hardness and nitrite content; burette and pipettes. The refractometer has to be separately ordered *(models may vary according to region)*.

Art. 9804

Maintenance and other equipment

Fluid Extractor
Suitable for aspirating floating residues (tramp oils, chips, etc.) and for extraction of the metal working fluids in machines or containers. Metal chips are also vacuumed. The suction unit is operated with compressed air (without electricity). It can be used either in suction or pressure mode by means of a change-over lever. Simple in use.

Art. 9274

Drum level indicator
This gauge always shows the level of oil in the drum externally, to prevent emptying before drawing only water instead of emulsion. It indicates the concentrate consumption at any time, so that new concentrate can be ordered before it is too late.

Art. 9292

Products may differ from these illustrations.

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