Blaser. SWISSLUBE

When the coolant becomes a Liquid Tool.

Handling and care of water-miscible coolants

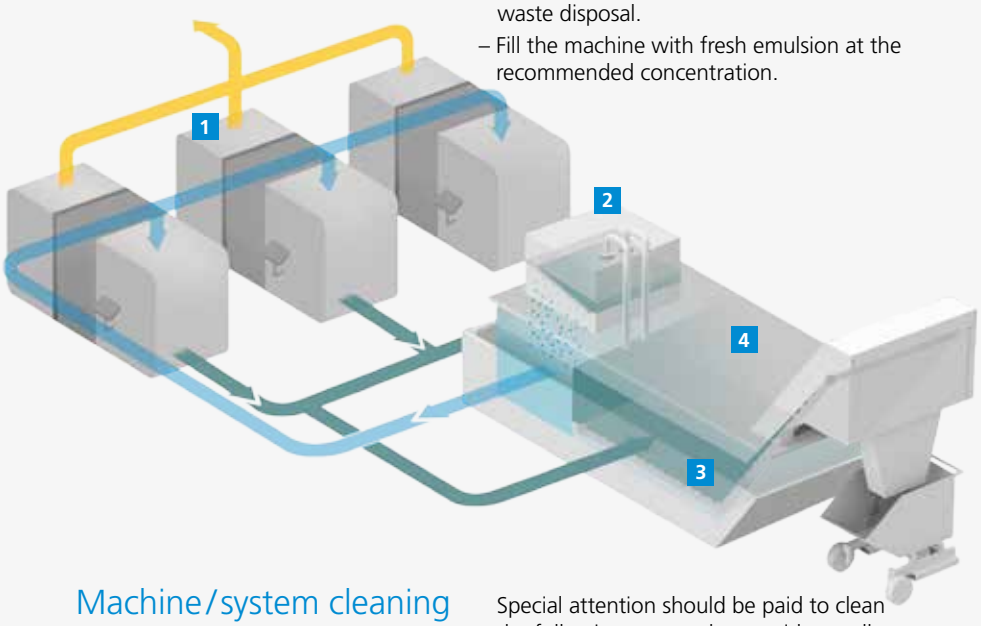
Before filling

Initial fill or re-filling

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

Proceed as follows

- Add system cleaner to the old emulsion as per recommended dosage. Then work with this mixture so that the cleaner can circulate throughout 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 turn the chip conveyor on and flush all the nozzles as well as 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. **Air filtration unit**
2. **Filter**
3. **Chip conveyor**
4. **Metalworking fluid tank**

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

Filling

Water quality

Chloride content

Water hardness tolerance

Recommended mixing temperature

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

The metalworking fluid emulsion is mainly comprised of water. The water quality (chloride content, hardness and pH) varies widely by region and country. Poor water quality can cause negative effects on the metalworking fluids, machine parts and components.

Should be as low as possible, no more than 25 ppm.

Varies according to product. For most Blaser products 90 –270 ppm 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 (>270 ppm), tap water can be used for mixing new emulsions, but for daily topping-off it is better to use water that is de-mineralized or treated by reverse osmosis.

Concentrate: min. +50°F / max. +86°F
Water: min. +50°F / max. +86°F

Never mix the existing metalworking fluid with any other product.

Important: Never add water alone or straight concentrate to the metalworking fluid emulsion.

We recommend using a Jetmix or Minimix to make a finely dispersed, homogeneous emulsion of metalworking fluid concentrate and water.

First fill a container with water. Then add the right amount of concentrate 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 metalworking fluid pumping system!

Monitoring

In order to detect adverse developments and address them in a timely manner, regularly check the following parameters:

Concentration

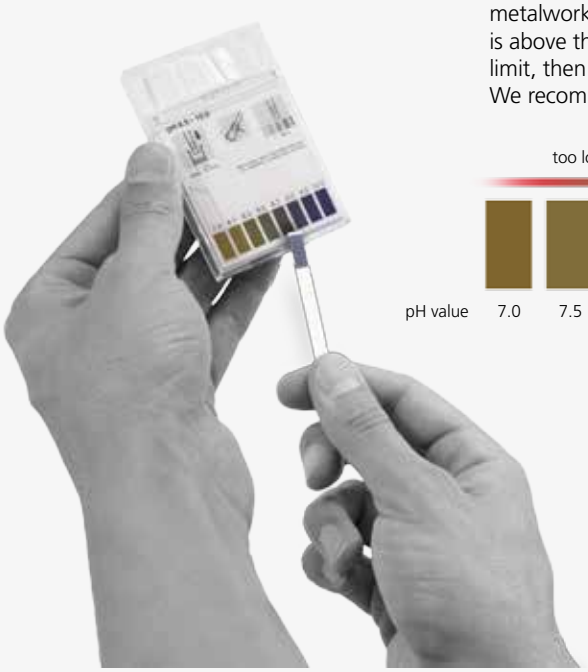
Keep the concentration within the recommended range. This ensures the optimal metalworking fluid condition for best machining performance and corrosion protection with minimal foaming and long term stability. Top-off concentration can vary and is generally lower than the actual working concentration in the machine.

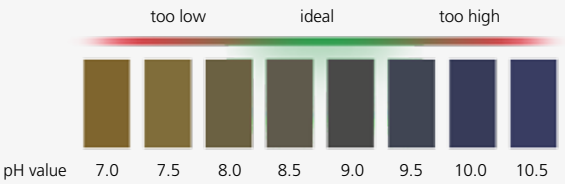
Topping-off frequency

Keep the coolant sump as full as possible by frequently topping-off. This maintains constant emulsion conditions as well as providing consistent, reliable machining parameters.

pH value

The pH value indicates the condition of the metalworking fluid during use. If the pH value is above the maximum or below the minimum limit, then corrective measures need to be taken. We recommend checking the pH value weekly.





Metalworking fluid maintenance

A minimal effort in metalworking fluid maintenance is a good investment

Tramp oil removal, filtration

Efficient filtration and regular removal of the tramp oil with a skimmer are enough to keep the emulsion in optimal condition. Good fluid maintenance promotes long sump life, thus reducing coolant disposal and expensive additive additions.

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.

Blaser. SWISSLUBE

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

Preparation of emulsions and solutions

 	Jetmix emulsion mixers The Jetmix is the ideal mixing device for preparing homogeneous finely dispersed emulsions of metalworking fluid concentrate into water. Correct preparation is preconditional for full exploitation of the emulsion stability. Capacity at 84 psi water pressure: 475 gallons/hour for Jetmix and 254 gallons/hour for Minimix.	Jetmix for drum mounting	Art. 9275
		Minimix	Art. 9259
	Refractometer For fast and easy measurement of water-miscible metalworking fluid concentration.		Art. 9288

Monitoring of emulsions and solutions

	Test strips Test strips for measuring pH value, water hardness.	pH value	Art. 9650
		water hardness	Art. 9651
	Service kit Standard equipment: Test strips for measuring pH value and water hardness, Atago refractometer, neat oil filter kit and sample bottles.		

Products may differ from these illustrations.

Blaser Swisslube Inc.
31 Hatfield Lane
Goshen, New York 10924
T 845 294 3200
F 845 294 3102
mailboxusa@blaser.com

Certified to ISO 9001/14001/21469 OHSAS 18001

14.214 US (0615)