

STARCHEM

Water Conditioner

Metalworking Fluid Additive

GENERAL DESCRIPTION

Water Conditioner reduces the total water hardness in metalworking fluid mixes by chemically bonding with multivalent cations such as calcium and magnesium ions.

APPLICATION

Water Conditioner is recommended for use in semisynthetic and soluble oil metalworking fluids. Emulsion products provide maximum performance in the 100 ppm to 200-ppm hardness range. Water hardnesses below 100 ppm can cause foam whereas water hardnesses above 200 ppm can cause residues, dirty machines and parts, and split mixes.

Add **Water Conditioner** to the clean side of central systems or return troughs or directly to the sump of individual machines. On a fresh recharge, adding Water Conditioner to the water before adding the metalworking fluid concentrate will provide maximum effectiveness.

A 1:1,000 addition of **Water Conditioner** reduces total water hardness by 100 ppm. The attached table provides the levels of **Water Conditioner** required to reduce the total hardness to 150 ppm. The addition levels are based on the current water hardness of the system and the sump size.

PHYSICAL PROPERTIES

Form	Clear Liquid	Specific Gravity (H₂O=1)	1.29
Solubility in Water	Complete	Density, lbs./gals.	10.8

AVAILABILITY

Water Conditioner is available in 5-gallon pails, 55-gallon drums, and in bulk.

HEALTH & SAFETY

The most recent MSDS is available from either **STARCHEM** or your authorized **STARCHEM** Distributor.

- For Industrial Use only. Consult **STARCHEM** before using this product on any metals or applications not specifically recommended.
- The general description, recommended uses, application data and statements in the product literature are guidelines. Because this product may be used for a variety of applications over which the manufacturer has no control, the manufacturer assumes no liability for incidental, consequential, or direct damages of any kind, regardless of causes, including negligence.

Water Conditioner Additions to Reduce Total Water Hardness to 150 ppm

Sump Size, Gals.	Current Water Hardness											
	250 ppm		300 ppm		350 ppm		400 ppm		450 ppm		500 ppm	
	Amount of Water Conditioner Required											
	oz.	gals.	oz.	gals.	oz.	gals.	oz.	gals.	oz.	gals.	oz.	gals.
50	6.4		9.6		12.8		16.0		19.2		22.4	
100	12.8		19.2		25.6		32.0		38.4		44.8	
150	19.2		28.8		38.4		48.0		57.6		67.2	
200	25.6		38.4		51.2		64.0		76.8		89.6	
300	38.4		57.6		76.8		96.0		115.2			1.1
400	51.2		76.8		102.4			1.0	153.6	1.2		1.4
500	64.0		96.0			1.0		1.3		1.5		1.8
1,000		1.0		1.5		2.0		2.5		3.0		3.5
1,500		1.5		2.3		3.0		3.8		4.5		5.3
2,000		2.0		3.0		4.0		5.0		6.0		7.0
2,500		2.5		3.8		5.0		6.3		7.5		8.8
3,000		3.0		4.5		6.0		7.5		9.0		10.5
4,000		4.0		6.0		8.0		10.0		12.0		14.0
5,000		5.0		7.5		10.0		12.5		15.0		17.5
7,500		7.5		11.3		15.0		18.8		22.5		26.3
10,000		10.0		15.0		20.0		25.0		30.0		35.0
15,000		15.0		22.5		30.0		37.5		45.0		52.5
20,000		20.0		30.0		40.0		50.0		60.0		70.0
25,000		25.0		37.5		50.0		62.5		75.0		87.5
30,000		30.0		45.0		60.0		75.0		90.0		105.0
40,000		40.0		60.0		80.0		100.0		120.0		140.0
50,000		50.0		75.0		100.0		125.0		150.0		175.0
100,000		100.0		150.0		200.0		250.0		300.0		350.0

CIMCOOL® FLUID TECHNOLOGY

3000 Disney Street

Cincinnati, OH 45209

Tel (513) 458-8199 Fax (513) 458-8179