



Metalworking Fluid Selection by Score

Hazardous Waste and Toxics Reduction Program

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Related Information

Publication 21-04-025: [Toxics Evolution Metalworking Fluids Project Report](#)¹

Contact Information

Hazardous Waste and Toxics Reduction Program

P.O. Box 47600
Olympia, WA 98504-7600
Phone: 360-407-6700

Website: [Washington State Department of Ecology](#)²

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¹ <https://apps.ecology.wa.gov/publications/SummaryPages/2104025.html>

² www.ecology.wa.gov/contact

³ www.ecology.wa.gov/accessibility

Metalworking Fluid Selection by Score

Warning: Businesses in Washington state are ultimately responsible for the proper designation and disposal of the waste they generate. Improper use of this score (using the score without understanding its underlying assumptions and limitations) does not change your disposal responsibilities. Do not use the list until you understand it.

Want help or an explanation on using the list? Contact a [toxic reduction assistance provider](#)⁴ in your region.

Understanding Disposal Status

Businesses must know the **disposal status of their spent metalworking fluids (MWF)** to properly manage and dispose of their spent MWF. The alternatives list shows the **unused product disposal status**. What is the difference between the two?

- Spent MWF has been used to depletion.
- Unused product is fresh out of the drum (diluted if water based).

Knowing the unused product disposal status can really help you pick an alternative MWF by screening out ones that are guaranteed to become dangerous waste (DW) when spent and identifying ones that will not be DW, **provided that you follow certain best management practices**. Businesses are ultimately responsible for proper designation and disposal of spent MWF because Ecology cannot control business management practices.

Ecology worked with MWF manufacturers to identify the chemicals and properties of their product MWFs. We used the information to designate and determine the disposal status of the MWFs as unused product. **Sometimes** the disposal status of an unused product is the same as the disposal status of the spent MWF.

The disposal status of an unused product MWF and the disposal status of a spent MWF **are the same if:**

- The disposal status of the unused product is DW. Then the disposal status of the spent MWF will be DW too. Avoid managing DW by avoiding MWFs with an unused product disposal status of DW.
- The disposal status of unused product is “used oil.” Then the disposal status of the spent MWF will be “used oil” as long as chlorinated tapping fluids are not used and spent MWF is not mixed with anything except other used oil. You risk making dangerous waste if do not follow these best management practices.

⁴ <https://ecology.wa.gov/ToxicsReductionTeam>

The unused product MWF disposal status and spent MWF disposal status **are not the same** if:

- The unused product disposal status is “not used oil” (it contains a vegetable or animal oil). MWFs with unused product status of “not used oil” must be fully designated under the Dangerous Waste Regulations (WAC 173-303, sections -070 through -100) to determine if it’s DW. Ecology review indicated that many of these MWFs appeared not to be DW before use, but could end up being DW depending on the contaminants they pick up on the way to becoming spent. Some (very few) were DW before use.

For more information about designation, please see our [designate your waste webpage](#).⁵

How to Use the MWF Selection by Score Alternatives List

What does all this mean to you? How should you use the Metalworking Fluids by Score to find a non DW MWF?

If you do all of the following, you will stop making dangerous waste MWF:

- Pick an MWF as high up the list as you can that has an unused product disposal status of “used oil.”
- Do not use chlorinated tapping fluids.
- Do not mix spent MWF with anything except other used oil.

The fluids higher up the list means they contain fewer toxic substances for your workers to breathe and touch. We recommend you pick one with the lowest weight percentage of unknown toxic substances because unknowns may be toxic.

If you pick an MWF that is “not used oil,” designate the MWF when spent. If you pick or use one that is DW, manage it as DW when spent.

Metalworking Fluids by Score Alternatives List

This score was last updated July 14, 2022.

Table 1: Water-based metalworking fluids found in Washington state.⁶

Metalworking Fluid Name	Unused Product Disposal Status	% Toxic Substances	% Unknown Substances	% Preferred Substances
Blaser Synergy 735 ⁷	Not used oil, not DW	0	0.6	99.4
Goodson SGC-10 (SDS: FG-550) ⁷	Used oil	0	1.3	98.7
Blaser Blasocut 4000 STRONG ⁷	DW WP01, WP02	0	1.5	98.5
Blaser Vasco 7000 ⁷	Not used oil, not DW	0	2.0	98.0

⁵ <https://ecology.wa.gov/Designation>

⁶ Sorted by percent toxic substances reported by manufacturer as being in product as used.

Metalworking Fluid Name	Unused Product Disposal Status	% Toxic Substances	% Unknown Substances	% Preferred Substances
Qualichem Xtreme Cut 250C ⁷	DW WP02	0	2.3	97.7
Blaser Blasocut 935 SW ⁷	Not used oil, not DW	0	3.2	96.8
Qualichem Q-Cool 355D ⁷	Used oil	0	3.2	96.8
Trimmicrosol585XT ⁸	Used oil	0	4.7	95.3
Buckeye Lubricants #324-24NC ⁷	Used oil	0	5.0	95.0
Hangsterfers-500CF German MWF ⁷	Not used oil, not DW	0	5.0	95.0
Hangsterfers Semi Synthetic S-787 ⁷	Not used oil, not DW	0	5.0	95.0
Fuchs Ecocool S 761B ⁷	Used oil	0	5.0	95.0
Syntillo 9918 ⁷	DW WP02	0.02	4.68	95.3
Blaser Blasocut 2000 CF SW ⁷	Not used oil, not DW	0.03	0.97	99.0
Blaser Blasocut BC 35 NF ⁷	Not used oil, not DW	0.05	0.95	99.0
Blaser Blasocut BC 35 SW ⁷	Not used oil, DW WT02	0.05	0.95	99.0
Castrol Carecut S 130 ⁷	Not yet determined	0.05	4.05	95.9
Chevron Soluble B OIL ⁷	Used oil	0.07	4.73	95.2
Qualichem Xtreme Cut 290 ⁷	Used oil	0.15	2.85	97.0
Qualichem EQO PURE 450 ⁷	Not used oil, not DW	0.15	4.35	95.5
Syntillo AL 30 ⁷	DW WT02	0.15	4.55	95.3
Castrol 311 Synkool SS ⁷	Used oil	0.18	4.82	95.0
Cimstar Qualstar LF Pink ⁸	Used oil	0.27	5.33	94.4
Lenox Band Ade ⁹	DW WT02	0.5	7.5	92.0
Schaeffers Maxkool 411 SS ⁷	DW WT02	0.58	3.02	96.4
Rustlick WS 5050 ⁹	DW WP01, WP02	1.0	2.4	96.6
Techcool 35052 ⁷	DW WP02	1.3	3.7	95.0
Xtreme Cut 291VLC ⁷	DW WP01, WP02	1.5	3.3	95.2
Hocut 795 B ⁷	Used oil	1.7	3.0	95.3

⁷ Water diluted 20:1, which is 19 parts water to 1 part concentrate.

⁸ Water diluted 15:1, which is 14 parts water to 1 part concentrate.

⁹ Water diluted 10:1, which is 9 parts water to 1 part concentrate.

Metalworking Fluid Name	Unused Product Disposal Status	% Toxic Substances	% Unknown Substances	% Preferred Substances
Cimcool Cimperial 1070B Blue ⁷	DW WP01, WP02	1.7	0.6	97.7
Spirit 6000	DW WP02	3.1	0.75	96.15
SemiSpar HD ⁹	DW WP01, WP02	3.25	2.3	94.45
Far West soluble Oil 2500 ⁸	DW WP01, WP02	4.3	3.2	92.5
Rustlick WS 1000 ⁹	DW WP01, WP02	?	10.0	90.0

Table 2: Straight oils and synthetics not mixed with water.

Metalworking Fluid Name	Unused Product Disposal status	% Toxic Substances	% Unknown Substances	% Preferred Substances
Blaser Blasogrind GTC7	Not used oil, not DW	0	2.0	98.0
Blaser Vascomill 10	Not used oil, not DW	0	3.0	97.0
Blaser Vascomill 22	Not used oil, not DW	0	4.0	96.0
Blaser Blasomill TLB	Not used oil, not DW	0	5.0	95.0
Blaser Blasogrind HC 5	Not used oil, not DW	0	8.0	92.0
Goodson Man845	DW WP01, WP02	0	5.0	95.0
Qualichem EQO-Max 712 MM	Not used oil, not DW	0	30.3	69.7
Qualichem EQO-Max 716	Not used oil, not DW	0	50.0	50.0
Hangsterfers Missile Lube	Not used oil, not DW	0	100.0	0
Goodson VG010 valve grinding oil	Used oil	0	100.0	?
EQO-Max 716	Not used oil, not DW	0	50.0	50.0
Blaser Blasomill GT 22	Used oil	5.0	13.0	82.0
Met-Cut 754HD	Not used oil, not DW	20.0	80.0	0
Lubricoolant 2050 AC	DW WT02	75.0	22.0	3.0
Rapid Tap Cutting Fluid 22 oil	DW WP01, WP02	85.0	15.0	0
Fuchs Ecocut 30EDM	Used oil	?	100	0
Smartcut	WP01	?	100	?