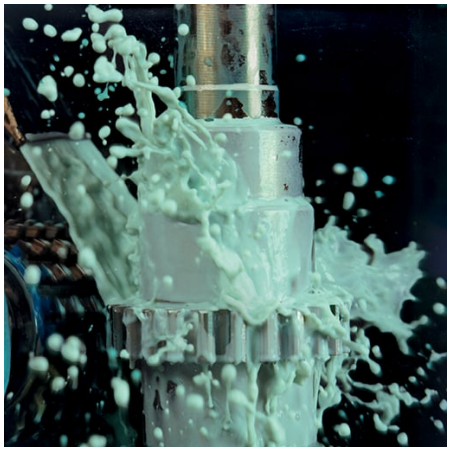
TRIM® VHP® E320

Very High-pressure, High-lubricity Emulsion

TRIM VHP E320 is a specialized heavy-duty chemical emulsion (or soluble oil) coolant concentrate. This product is a proven performer in heavy-duty machining, grinding, and some stamping operations. It is particularly effective in creepfeed grinding of steel and super alloys with either conventional or CBN wheels. It will run in very high-pressure situations with little- to no- foam.

VHP



Stand up to pressure:

TRIM® VHP® (Very High Pressure) fluids perform in high-volume, high-pressure applications with little to no foam. These specialized heavy-duty emulsions (or soluble oils) are used in very high-pressure operations where extreme lubrication is required.

VHP soluble oils provide the boundary lubrication necessary in operations such as creepfeed grinding, drilling, milling, turning, tapping, or roll-form threading of multiple metals.

VHP soluble oils leave a soft, fluid film for easy cleaning, and lower maintenance costs.

Aerospace Approvals

Company	Specification
Applied Materials	UHV
Raytheon Technologies/Collins Aerospace/Pratt & Whitney	No specification available

Choose VHP E320:

- Compatible with a very wide range of materials, but is particularly effective on high-strength steel and super alloys
- Low-to-no foam even in very high-pressure operations like creepfeed grinding, Ejector® drilling, and gundrilling or gunreaming
- Superior cleaning and EP lubrication characteristics to assist in fast, deep cuts with plated CBN wheels in high-production steel grinding and slotting operations
- Very good anti-weld properties without the use of chlorinated EP additives
- Keeps machines very clean while leaving a soft fluid film for ease of cleaning and reduced machine maintenance costs
- Uses standard metalworking recycling and disposal techniques

VHP E320 especially for:

Applications — creep-feed grinding, cutting, drilling, Ejector® drilling, grinding, gun drilling, gun reaming, heavy-duty machining center work, high-pressure, reaming, roll threading, slotting operations, stamping, tapping, thread forming, and very high pressure (VHP)

Materials — aluminum, exotic alloys, high-strength steels, steels, and super alloys

Industries — aerospace, automotive, and semiconductor equipment

VHP E320 is free of — chlorinated EP additives and NPEs

Master Fluid SOLUTIONS®

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Application Guidelines

- Higher concentrations of VHP® E320 (up to 7.5%) increase both boundary and EP lubrication.
- Not recommended on long runs of most cast irons.
- Maintenance of sufficient concentration is critical to long sump life and ease in filtration.
- Not recommended on very reactive metals like magnesium and zirconium.
- For additional product application information, including performance optimization, please contact your Master Fluid Solutions' Authorized Distributor at https://www.masterfluids.com/na/en-us/distributors/index.php, your District Sales Manager, or call our Tech Line at 1-800-537-3365.

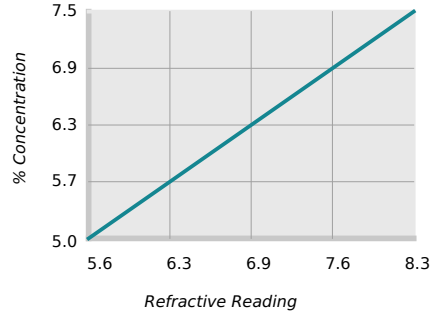
Physical Properties Typical Data

Color (Concentrate)	Olive green to amber
Color (Working Solution)	Milky white
Odor (Concentrate)	Mild, oily
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D93-08)	> 360°F
pH (Typical Operating as Range)	8.2 - 8.9
Coolant Refractometer Factor	0.9
V.O.C. Content (ASTM E1868-10)	112 g/l

Recommended Metalworking Concentrations

Light Duty	5.0% - 5.5%
Moderate Duty	5.5% - 7.5%
Heavy Duty	7.5% - 7.5%
Design Concentration Range	5.0% - 7.5%

Concentration by % Brix



% Concentration = Refractive Reading x Refractive Factor
Coolant Refractometer Factor % Brix = 0.9

Health and Safety

Request SDS

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Mixing Instructions

- Recommended usage concentration in water: 5.0% - 7.5%.
- To help ensure the best possible working solution, add the required amount of concentrate to the required amount of water (never the reverse) and stir until uniformly mixed.
- Use premixed coolant as makeup to improve coolant performance and reduce coolant purchases. The makeup you select should balance the water evaporation rate with the coolant carryout rate. Use our Coolant Makeup Calculator to find the best ratio for your machine: apps.masterfluids.com/makeup/.
- Use mineral-free water to improve sump life and corrosion inhibition while reducing carryoff and concentrate usage.



1-gallon jug
SKU: VHPE320-1G
UPC-12: 641238022350



5-gallon pail
SKU: VHPE320-5G
UPC-12: 641238012245



54-gallon drum
SKU: VHPE320-54G
UPC-12: 641238011934



270-gallon tote
SKU: VHPE320-270G
UPC-12: 641238033844

Additional Information

- Use Master STAGES™ Whamex™ for a quick and thorough precleaning of your machine tool and coolant system.
- Consult Master Fluid Solutions before using on any metals or applications not specifically recommended.
- This product should not be mixed with other metalworking fluids or metalworking fluid additives, except as recommended by Master Fluid Solutions, as this may reduce overall performance, result in adverse health effects, or damage the machine tool and parts. If contamination occurs, please contact Master Fluid Solutions for recommended action.

- TRIM® and VHP® are registered trademarks of Master Chemical Corporation d/b/a Master Fluid Solutions.

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https://2trim.us/di/?i=na_en-us_VHPE320

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