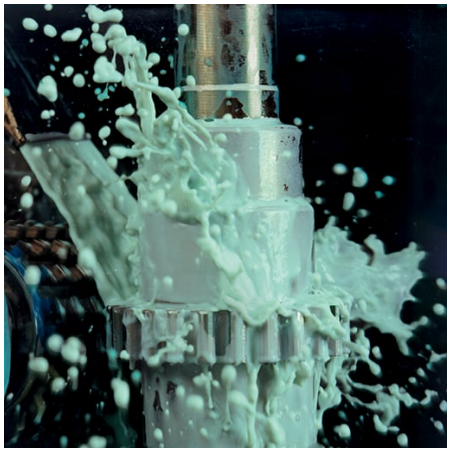
TRIM® VHP® E210

Very High-pressure, Chlorine-free Emulsion

TRIM VHP E210 is a specialized, heavy-duty chemical-emulsion, soluble-oil, coolant concentrate. This product is a proven performer in heavy-duty machining, grinding and some stamping operations. It will even 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
General Dynamics	No specification available
Lockheed Martin/Sikorsky	No specification available

Choose VHP E210:

- Is compatible with a very wide range of material including steels, stainless steels, and aluminum alloys
- Low-to-no foam even in very high-pressure operations such as creepfeed grinding, Ejector® drilling, and gundrilling or gunreaming
- Has sufficient boundary lubrication to do roll-form threading in many materials
- Superior anti-weld properties without chlorinated EP additives
- Will keep 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 E210 especially for:

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

Materials — aluminum alloys, stainless steels, and steels

Industries — aerospace, automotive, and medical

VHP E210 is free of — chlorinated EP additives, chlorine, and NPEs

Master Fluid SOLUTIONS®

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Application Guidelines

- Higher concentrations of working solutions 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.
- Most filtration problems can be traced to either a low operating pH or tramp oil contamination.
- Not recommended on very reactive metals such as magnesium and zirconium.
- Prolonged contact with concentrations in excess of 7.5% may result in skin irritation.
- 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.

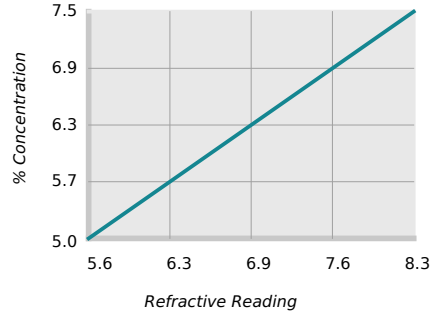
Physical Properties Typical Data

Color (Concentrate)	Olive green to amber
Color (Working Solution)	Milky, white
Odor (Concentrate)	Mild, oily
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D93-08)	> 351°F
pH (Typical Operating as Range)	8.2 - 8.9
Coolant Refractometer Factor	0.9
V.O.C. Content (ASTM E1868-10)	133 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: VHPE210-1G
UPC-12: 641238012016



5-gallon pail
SKU: VHPE210-5G
UPC-12: 641238012047



54-gallon drum
SKU: VHPE210-54G
UPC-12: 641238012054



270-gallon tote
SKU: VHPE210-270G
UPC-12: 641238034285

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.

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https://2trim.us/di/?i=na_en-us_VHPE210

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