ENGINEERED COOLANTS
Integrated Coolant Solutions

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***Engineered Coolants' products work to eliminate swarf build-up inside coolant system pipes and components, as well as to eliminate all the related problems, costs, and lost productivity and profits.***

# Engineered Coolants Reduces Swarf Build-Up to Increase Your Profits and Productivity!

## CASE STUDY: Glass Fabricators Solve Swarf Problems in Coolant Sytems Using EC and See Major Benefits.

**PROBLEM:** Grinds / Swarf from glass fabrication equipment builds up in coolant system piping, valves, fittings, grinder heads, sumps, etc., and causes major problems, including:

**- Reduced Coolant Flow = Decreased Revenues**

- This reduces the cooling potential of the coolant, and allows too much heat energy to transfer to the glass being worked on. This, in turn, causes fabrication quality problems, more breakage in the furnace, and more, all of which leads to reduced productivity, reduced revenues, etc.

**- Build-Up of Grinds in Coolant = Increased Costs**

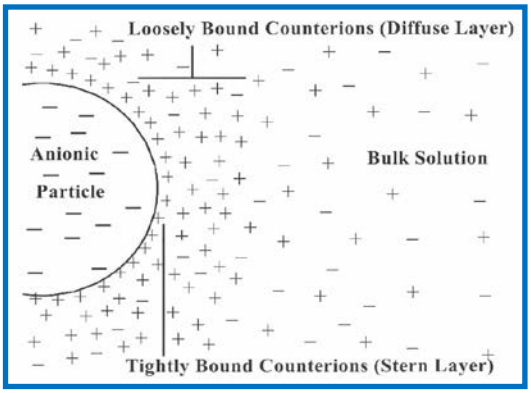
- The underlying problem is that the grinds are not being removed from the coolant as effectively as they should be. These grinds remaining in the coolant cause fabrication problems including increased wheel loading, surface scratches, increased energy at the grind interface, poor edge quality, etc., as well as the need to run equipment slower and reduce production, replace coolant more often, and more.

**- Destroys Coolant System Piping = Decreased Productivity**

- As glass is ground, it develops a very high ionic charge on both the glass part and the glass particles ground off. These small glass fines (.35-.40 microns) are partially suspended in the coolant and will fall out naturally based on their weight, geometry, and coolant flow velocity. Typically, these small glass particles are platelet in shape and exhibit significant surface area. The platelet shape will cause a tendency for the particles to settle flat side to flat side, which allows their highly reactive surfaces to electrostatically bond, causing a hard to remove buildup in coolant piping.

**SOLUTION:** The key to solving these problems is to not allow the highly charged surfaces to make contact with each other until they reach a removal point. Engineered Coolants' products do exactly that through a process called Controlled Density. The coolant contains materials that carry a strong cationic (positive) charge that attracts / brings together ionically charged glass particles. At this point, the particle is easily removed from the coolant system. The charge that tends to bind the remaining material to itself and the surrounding surfaces is, for the most part, neutralized, which will dramatically reduce the potential to plug piping systems and build up on equipment. For Engineered Coolants' customers, the results of using EC coolant has been substantial, including:

**- Piping Stays Clean, Even After Stops and Restarts**
**- Past Sodium Build-Up in Pipes is Broken Up and Cleaned Out**
**- Plumbing Cleaning and Replacement Costs Eliminated**
**- Production Downtime Reduced & Productivity Increased**
**- Better, Cleaner Edge Quality / Less Rejects**
**- Less Breakage in Furnace / Less Waste**
**- Cleaner Coolant Allows Machines to Run Faster**
**- Longer Grinding Wheel Life / Reduced Costs**
**- Reduced Coolant Costs and Less Maintenance / Management**




**Controlled Density**

**Engineered Coolants' products stop glass grind particles from binding together and settling out, eliminating major problems in piping and valves, and increasing productivity and profits.**

***Contact Engineered Coolants to learn more about our coolant, as well as our cutting fluid and other products!***