CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	10/06/2008
Experimenters:	Heidi Wilcox
ClientType:	Tool Manufacturer
ProjectNumber:	Project #1
Substrates:	Steel
PartType:	Part
Contaminants:	Metal fines
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Visual
Purpose:	To evaluate selected products on customer supplied parts using immersion cleaning at room temp.
Experimental Procedure:	Eight products were selected from the lab's on-line database, www.cleanersolutions.org, based on supplied information from client. Two products were diluted to 5% using DI water in 600 ml glass beakers. Six products were used at full strength. Solutions were used at room temperature, 68 F, and cleaned by immersion for 1-2 minutes and dried using air blow off for 30 seconds at room temperature.
Results:	All the products seemed to remove some of the metal shot from the parts and could be seen at the bottom of the beakers. Half of the cleaners seemed to leave the parts darker then when they were cleaned and left a residue on the parts even after blow drying. Not sure if this residue will affect the copper sulfate process that is done after. The customer will be inspecting and coating the parts to see.

Cleaner	Observation
Polyspray Jet 790 XS	Iron shot on bottom of beaker. Parts dried well but were spotty. No visual residue on the parts. Tops were light in color like before they were cleaned.
Daraclean 282 GF	Iron shot on bottom of beaker. Parts dried well but were spotty. No visual residue on the parts. Tops were light in color like before they were cleaned. Cleaner foamed
Smart Solv 605	Iron shot on bottom of beaker. Tops of parts were glossy and dark and clearly had a film or residue on them.
SoyClear 1500	Iron shot on bottom of beaker. Tops of parts were glossy and dark and clearly had a film or residue on them.
SC Maxisolv	Iron shot on bottom of beaker. Tops of parts lighter and less residue on the parts overall
SolSafe 245	Iron shot on bottom of beaker. Tops of parts lighter and less residue on the parts overall then previous two and next cleaner.
Bio Gold Parts Cleaner	Iron shot on bottom of beaker. Tops of parts were glossy and dark and clearly had a film or residue on them.
SC Soyester	Iron shot on bottom of beaker. Parts are comparable to parts cleaned in Solsafe 245. The tops were lighter and had less residue on them overall then some of the other solvents.

Summary:

Substrates:	Steel
Contaminants:	Metal fines

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
US Polychem Corporation	Polyspray Jet 790 XS	5	0.00	☑	
Magnaflux	Daraclean 282 GF	5	0.00	☑	
United Laboratories International	Smart Solve 605	100	0.00	☑	
AG Environmental Products	Soy Clear 1500	100	0.00	☑	
Gemtek Products	Safe Care (SC) Maxi Solv	100	0.00	☑	
Bio Chem Systems	Solsafe 245	100	0.00	☑	
Vertec BioSolvents	VertecBio Gold 35	100	0.00	☑	
Gemtek Products	SC Soyester	100	0.00	☑	

Conclusion: The eight products removed iron shot from the parts. The issue will be the residue left on the part and if they can be copper sulfated or not. The parts will be brought down or shipped to the customer for them to try coating them and their feedback will guide the next steps on if a rinse will be tried or ultrasonics will be used.