CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 09/15/2003

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Cutting/Tapping Fluids

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Five products were used at full strength, heated to 120 F on a hot plate. Fifteen preweighed coupons were coated with Remi Corp Re-Lion cutting fluid and allowed to dry overnight and reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar-agitation, rinsed in a tap water bath for 15 seconds at 120 F and dried using air blow off for 30 seconds at 68 F. Coupons were allowed to dry overnight and then reweighed a final time. Efficiencies were calculated.

Note: Bio T Foam Plus was sprayed onto coupons at room temperature and allowed to sit for 5 minutes. The cleaner was then rinsed.

Results: Two of the five products were successful in removing the cutting fluid. AW Chesterton and Eastern Etching & Chemical products removed 93 and 88% respectively.

Cleaner	Initial wt	Final wt	% Removed
278 Super Solv	0.0574	0.0091	84.15
	0.9922	0.0141	98.58
	0.9189	0.0174	98.11
Bio T Foam Plus	0.8147	0.0841	89.68
	0.8837	0.0718	91.88
	0.0705	0.0207	70.64
Ecobrite AK	0.5828	0.0346	94.06
	0.1262	0.0311	75.36
	0.7383	0.0399	94.60
Rip Tide	0.5350	0.0344	93.57
	0.0760	0.0252	66.84
	0.0715	0.0182	74.55
EZ Solv	0.1179	0.0385	67.35
	0.1193	0.0448	62.45
	1.1147	0.0683	93.87

Summary:

Substrates:	Stainless Steel
Contaminants:	Cutting/Tapping Fluids

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AW Chesterton	278 Super Solv	100	93.61	☑	
Bio Chem Systems	Bio T Foam Plus	100	84.06	☐	
Eastern Color and Chemical Company	Ecobrite Cleaner AK	100	88.01	☑	
EcoLink	Rip Tide	100	78.32	☐	
Gemtek Products	SC EZ Solv Safety Solvent	100	74.56	☐	

Conclusion: Two successful products were found for this cutting fluid.