

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 01/19/2009

Experimenters: Daniel Pina

ClientType: Lab

ProjectNumber: Project #1

Substrates: Brass
PartType: Part

Contaminants: Greases

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To test nontoxic industrial cleaning solutions for grease removal.

Experimental Procedure:

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

Products were selected based on the compatibility of substrate and removal of foreign substance. Used 5% concentration and heated the samples at 135F. The steel coupons were immersed in a product for 5 minutes, rinsed for 30 seconds in tap water at 120F and dried in 30 seconds using compressed air is room temperature. Coupons were coated with used oil. Using a handheld swab and allowed to dry for 144 minutes at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. After cleaning process, the final weights were recorded, efficiencies were calculated and

recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed	
Magnaflux Daraclean 259		59.0000		
	1.7741	1.6813	5.23	
	1.5599	1.4506	7.01	
	1.4427	1.4054	2.59	
Magnaflux Daraclean 236				
	0.7818	0.6928	11.38	
	1.5056	1.4638	2.78	
	0.1570	0.1342	14.52	
Magnaflux Daraclean 238				
	0.5826	0.5460	6.28	
	1.1418	1.0280	9.97	
	0.8883	0.8388	5.57	
Magnaflux Daraclean 23				
	0.8092	0.7514	7.14	
	0.4238	0.3678	13.21	
	0.9719	0.8904	8.39	
Mangnaflux Daraclean 257				
	2.3197	2.1987	5.22	
	1.3606	1.2548	7.78	
	0.6883	0.6259	9.07	
Kyzen Corporation Metalnox M6432				
	0.7262	0.6465	10.97	
	0.9068	0.8676	4.32	
	0.3740	0.3410	8.82	
Kyzen Corporation Optisolv OP 7168				
	0.3493	0.2916	16.52	
	0.9476	0.8972	5.32	



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	0.6929	0.6225	10.16
Brulin Corporation Aquasafe			
	1.4997	1.4407	3.93
	2.0268	1.9645	3.07
	2.4741	2.4094	2.62
Warren Chemical Company, Sea Wash			77
	0.6615	0.6011	9.13
	1.5551	1.4951	3.86
	0.9329	0.8734	6.38
Phase III inc. Nature Solve AC			
	0.3697	0.3019	18.34
	1.5269	1.4697	3.75
	3.6326	3.5683	1.77

Summary:

Substrates:	Brass						
Contaminants:	Greases						
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:		
Magnaflux	Daraclean 259	5	4.94				
Magnaflux	Daraclean 238	5	7.27				
Magnaflux	Daraclean 203	5	9.58				
Magnaflux	Daraclean 257	5	7.35				
Kyzen Corporation	Metalnox M6432 (For Comparison Only)	5	8.04				
Kyzen Corporation	Optisolv 7168	5	10.67				
Warren Chemical Company	Sea Wash 77	5	6.46				
Phase III Inc	Nature Solve AC	5	7.95				
Brulin Corporation	Aqua Safe	5	3.21				

Conclusion:

None of the products has passed the minimum requirements of 85% removal rate to have a passing score with the concentration that was tested on 5 percent.