

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1997
 DateRun: 08/11/1997
 Experimenters: Jason Marshall, Prashant Trivedi
 ClientType: Cabinet Manufacturer
 ProjectNumber: Project #1
 Substrates: Plastic
 PartType: Part
 Contaminants: Adhesive
 Cleaning Methods: Manual Wipe
 Analytical Methods: Tactile, Visual
 Purpose: Acetone baseline to compare alternatives
 Experimental Procedure: Seven chemistries were selected for testing. In addition to the chemistries, Acetone was used to give a baseline level to compare the alternatives to. The chemistries selected were:

Company	Tradename	Concentration
Brulin & Company	Compliance Blend	50%
AW Chesterton	803	100%, 50%
MacDermid	ND-17	50%
Isopropyl Alcohol	ISP	100%
Polychem	P.X.P.	100%
Easter Color	Eccobrite Cleaner AK	100%
Terpene Technology	HTF 85B	100%

The cleaners were applied to the sample using a saturated paper towel. The time and effort required to clean the contaminant were observed and noted. These two factors were then used to construct a table of cleaning effectiveness.

SUBSTRATE MATERIAL: Plastic
 CONTAMINANTS: 3M contact cement--30NF

Results:

Cleaner	Rating
Compliance 50%	poor
803 100%	okay/fair
803 50%	okay
ND-17 50%	fair/poor
ISP 100%	good/excellent
P.X.P. 100%	poor
Eccobrite 100%	Excellent
HTF85B 100%	Excellent
Acetone	Excellent

Excellent->Good->Okay->Fair->Poor

From the results obtained in the previous trial and from this trial, there were five possible alternatives for acetone. These cleaners were: Loctite 7360, Brulin Compliance 100%, Terpene Technology HTF 85B, Eastern Color & Chemical Company Eccobrite Cleaner AK and Isopropyl Alcohol. A table with more information on each cleaner was constructed to aid in the selection process.

It should also be noted that Isopropyl alcohol is flammable. In using IPA as a replacement, the current hazard may be eliminated; However, a different hazard comes into existence.

Summary:

Substrates:		Plastic			
Contaminants:		Adhesive			
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Fisher Scientific	Acetone (CAS: 67-64-1)	100		<input type="checkbox"/>	
Brulin Corporation	Compliance	50		<input type="checkbox"/>	

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AW Chesterton	803 Industrial & Marine Solvent II	100		<input type="checkbox"/>	
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MacDermid Industrial Products	ND 17	50		<input type="checkbox"/>	
Fisher Scientific	Isopropanol a459-4 70% VV (CAS:67-63-0)	100		<input checked="" type="checkbox"/>	
US Polychem Corporation	PXP	100		<input type="checkbox"/>	
Eastern Color and Chemical Company	Ecobrite Cleaner AK	100		<input checked="" type="checkbox"/>	
Tarksol Inc	Tarksol HTF 85 B	100		<input checked="" type="checkbox"/>	

Conclusion:

After trying several chemicals, five cleaners showed excellent removal of the contaminant. Additional information on these chemistries were provided to help aid the client in the selection of an appropriate substitution for Acetone.