CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1995

DateRun: 12/26/1995

Experimenters: Jay Jankauskas

ClientType: Adhesive Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Adhesive

Cleaning Methods: Manual Wipe

Analytical Methods: Visual

Purpose: Mixtures of best terpenes & aqueous cleaners

Experimental Procedure: The purpose of this experiment is to find a cleaner for Adhesive Manufacturer that will replace their current 4:1 heptane-toluene mixture. As of today, no aqueous or terpene chemistries have been effective. The alkene hydrocarbons from CSA (Bio-Safe 1023 & 1024) are the best performing chemistries to date. Today's test will be to try mixtures of the best terpenes and aqueous cleaners. A combination of the dissolving effects and the lifting effects of each of these cleaners might be good.
The best solvents tested to date were Solvent Kleene D-Greeze 500, Oakite Inproclean 4000 T and the CSA chemicals. The best aqueous chemistries tested to-date are the AW Chesterton 803 Marine Solvent, MacDermid ND-17 and Brulin Compliance.
Each chemistr0y was mixed up at a 50:50 ratio, one aqueous cleaner with a terpene solvent. Duro-Tac adhesive was allowed to sit on the coupons for 10 to 15 minutes. Cleaning solution was allowed to set on the contaminated coupons for thirty seconds.
SUBSTRATE MATERIAL: 316 Stainless Steel Coupons
CONTAMINANTS: Duro-Tac toluene-heptane based adhesive
CONTAMINATING PROCESS USED: Adhesives applied on with swab and allowed to sit for 10 minutes to 15 minutes

Results:

Mixture	Time of Removal
AW Chest & D-greeze 500	35 seconds
AW Chest & Oakite 4000T	65 seconds
AW Chest & CSA 1023	50 seconds
ND 17 & D-greeze 500	35 seconds
ND 17 & 4000-T	50 seconds
ND 17 & CSA 1023	50 seconds
Brulin & D-greeze 500	55 seconds
Brulin & Oakite 4000T	65 seconds
Brulin & CSA 1023	55 seconds

Summary:

Substrates:	Stainless Steel
Contaminants:	Adhesive

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AW Chesterton	803 Industrial & Marine Solvent II	50	0.00	☑	mix with D Greeze 500
AW Chesterton	803 Industrial & Marine Solvent II	50	0.00	☐	mix with Inproclean 4000 T
AW Chesterton	803 Industrial & Marine Solvent II	50	0.00	☐	mix with Bio Safe 1023
MacDermid Industrial Products	ND 17	50	0.00	☑	mix with D Greeze 500
MacDermid Industrial Products	ND 17	50	0.00	☐	mix with Inproclean 4000 T
MacDermid Industrial Products	ND 17	50	0.00	☐	mix with Bio Safe 1023
Brulin Corporation	Compliance	50	0.00	☐	mix with D Greeze 500
Brulin Corporation	Compliance	50	0.00	☐	mix with Inproclean 4000 T
Brulin Corporation	Compliance	50	0.00	☐	mix with Bio Safe 1023

Conclusion:

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Either a mixture of AW Chesterton & D-Greeze 500 or the ND 17 & D-Greeze 500. One final test will be performed on larger stainless steel parts to find appropriate sit times of the cleaning chemistries.