
Use of AcryShield A500[®]

Over Un-Reinforced EPDM to Reduce Oil Absorption

Objective:

To quantify and compare the oil absorption onto AcryShield A500 to Hypalon[®] coated un-reinforced EPDM

Background:

Due to its excellent durability, EPDM roofing enjoys a large portion of the currently installed low slope roofing inventory. However, one key shortcoming is its propensity to absorb large quantities of oil, causing the membrane to deform, weaken its structural integrity and create stress on field seams. National Coatings Acryshield A500 has demonstrated excellent resistance to oil absorption; however its quantitative effect has not been measured. Detailed below are the results of these experiments.

Details:

0.045mil samples of Firestone[®] EPDM were each coated with 20 dry mils of AcryShield A500 and Hypalon coatings and allowed to dry for 2 weeks. (Solvent-borne Hypalon coatings are currently used to resist oil and grease absorption. This coating chemistry represents the current acceptable standard.) After this drying period, the coated samples were swabbed with various oils and greases common to restaurants, manufacturing facilities and repair shops.

The results of ASTM D-471 after 163 hours at 75°F, measuring percent weight gain are listed below:

Solvent Type	AcryShield A500	Hypalon	Uncoated Control
ASTM #1 Oil	0.17%	0.24%	6.2%
ASTM #3 Oil	1.9%	0.29%	7.4%
Corn Oil	0.67%	0.26%	5.8%
Lard	0.47%	0.27%	3.9%
Grease (Auto)	0.56%	0.22%	6.4%

Conclusion: AcryShield A500 applied over EPDM exhibits similar although slightly lower resistance to oils and greases as the current commercially used Hypalon based coating.