



Stars Management DMCC

SUBMITTAL

POLAROOF RAC
(Urethane Waterproofing Coating)

POLAROOF RACTM



Urethane Waterproofing Coating

DESCRIPTION

POLAROOF RAC is a single component urethane, modified with bright aluminum flakes and fire retardant chemicals. It is especially designed as a waterproofing membrane for all kinds of roofing. POLAROOF RAC is tough and elastic with a high tensile strength and good puncture resistance, and contains corrosion-inhibiting pigments for protection against rust and acid rain. POLAROOF RAC is approved by Underwriters Laboratories® (UL) and Factory Mutual Research Corporation® (FM).

OUTSTANDING FEATURES

- Can be used over BUR, single-ply, metal, concrete, foam, wood, primed composites, masonry and others
- Produces a fully adhered, seamless, high density, waterproofing membrane
- Protects substrate against rust, corrosion, UV damage and acid rain
- Easy to apply directly out of the container by brush, roller or airless spray
- May be used on vertical, pitched and horizontal surfaces and withstands ponding water
- Lightweight membrane does not require removal old roofing materials, saving time and money

- Produces a waterproof surface that will not be deteriorated by fungal growth or algae
- Remains flexible, tough and weatherproof at low temperatures and will not flow at high temperatures
- Rapidly develops high tensile strength
- Will not re-emulsify or wash away with rainwater
- Will not become brittle and crack with age
- Can be easily recoated

APPLICATION

Surfaces must be dry, free of dirt, loose debris, oils, grease or any substance that could interfere with adhesion. Refer to the Polaprime data sheet for information regarding selection of appropriate primer if necessary. Application over

4" or 6" wide ROOFAB into a fresh coat of RAC applied at 15 mils wet thickness. The fabric is then saturated with a second application at sufficient thickness to remove all voids, fishmouths and dry spots. Bolt-heads on metal roofs should be daubed with sufficient RAC that they are encapsulated to the point of rundown. As soon as the POLAROOF RAC has dried, it may be coated with RAC or other compatible topcoat. Application over E.P.D.M., modified and other rubber roofs requires the preparation detailed above, including reinforcement of seams. Some rubbers will swell slightly immediately upon application. This is normal, the adhesion process is complete when the original dimensions have returned. New urethane foam should receive 2 coats of RAC at 15 mils wet thickness per coat to be sure that no foam is exposed to pinholes

SPECIFICATIONS	
Coating	Moisture-cure
VOC	200 gms/liter
Pot Life	Single component
Shelf Life	24 months
Recommended Thickness	30 mils dry film thickness
Coverage	2 to 3 gallons per 100 square ft
Packaging	1 gallon, 5 gallon, and 55 gallon containers
Color	Bright Silver

POLAROOF RACTM

Urethane Waterproofing Coating



detrimental to its overall performance. POLAROOF RAC should never be applied to a wet or damp surface, or pinholes may result.

LIMITATIONS

Shelf life is 24 months in unopened cans. Part-full cans should be avoided. Storage must be out of direct sunlight at below 90°F to avoid skinning.

MAINTENANCE

Damaged areas may be repaired by cleaning surface and application of POLAROOF RAC as described in application section

PRECAUTIONS

Contains solvent and reactive isocyanates Read MSDS thoroughly before using. Do not get on skin or in eyes. Do not ingest or inhale vapor. Make sure that vapor does

not enter building. If skin is contaminated, use suitable cleanser; if eyes are contaminated, wash with water for 15 minute and seek medical attention. If clothing contaminated discard. If ingested, Do NOT induce vomiting and seek medical attention. If inhaled, remove person to fresh air.

Keep out of reach of children and pets

TECHNICAL DATA		
Moisture Vapor Transmission	1.57 perms	ASTM E-96
Tensile Strength	600 psi	ASTM D-412
Elongation	500%	ASTM D-412
Flexibility at Low Temperatures	180° bend @ -10° C	ASTM C-711
Shore 'A' Hardness	56 degrees	ASTM D-2240
Surface spread of flame	Class 1	ASTM E-108
Puncture Resistance	120 psi	ASTM D-154-79
Viscosity at 70°F	4,500 cps	ASTM D-446
Drying Time @ 80°F (70% R.H.)	24 hours (to walk on)	
Total Cure @ 80°F (70% R.H.)	72 hours (to 56 deg. Shore 'A')	
Solids Content	82% (B.W.); 94% (B.V.)	ASTM D-1044
Application Equipment	Brush, roller or spray	
Cleaning of Equipment	Xylene or Aromatic Naptha	

NOTICE: The information presented herein is based on tests and data that Andek Corporation believes to be reliable. It is intended for use by technically qualified personnel at their own discretion and risk. Since conditions of handling and use are beyond our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be construed as a license to operate or a recommendation to infringe any patent.



MATERIAL SAFETY DATA SHEET
U.S. Department of Labor
Occupational Safety & Health
Administration

POLAROOF RAC

SECTION 1 – IDENTIFIERS

MANUFACTURER: Andek Corporation
TRADE NAME: Polarooft RAC
CHEMICAL FAMILY: Aluminum Extended Urethane Prepolymer

SECTION 2 – HAZARD IDENTIFICATION & EMERGENCY OVERVIEW

Emergency Overview: Toxic gases may be given off during burning or thermal decomposition. Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water.

Effects of Overexposure:

May cause lung damage and cause allergic skin and respiratory reaction. Effects may be permanent.

SKIN: Liquid may irritate skin.

EYES: Contact may cause severe damage; vapor may irritate.

BREATHING: Inhalation may cause headache, dizziness, nausea, and irritation of respiratory tract.

SWALLOWING: May be harmful or fatal if swallowed.

SECTION 3 - COMPOSITION

COMPONENT	CAS #	APPROX %	TLV
Aluminum Polished Flake	7429-90-5	9.5	
Barium Sulfate	727-43-7	11.5	
Naphtha, Light Aromatic Solvent	64742-95-6	17.0	
High Flash Mineral Spirit	8052-41-3	4.0	
Chlorinated Paraffin	8002-74-2	13.5	
Methylene Bisphenyl Isocyanate	101-68-8	2.3	
Polyether Prepolymer (Isocyanate solution) (boiling point <300°C, flash point >23°C)	N.O.S.	0.02ppm	
	41.0		

KNOWN CARCINOGENS OR MUTAGENS - TYPE & DEFINITION - None known

SECTION 4 – FIRST AID MEASURES

SKIN: Clean thoroughly with waterless hand cleaner, then follow with soap and water.

EYES: Flush with water for 15 minutes and seek immediate medical attention.

BREATHING: Move victim to fresh air. If asthmatic conditions occur, call a physician.

SWALLOWING: DO NOT induce vomiting. Seek medical attention immediately.

SECTION 5 – FIRE & EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): 108°F. Closed Cup (ASTM D50)

FLAMMABLE LIMITS: Lel 0.9; Uel 6.0

EXTINGUISHING MEDIA: Carbon dioxide; dry chemical; foam

SPECIAL FIRE FIGHTING PROCEDURES: If excessive fumes or smoke is encountered, wear self-contained respiratory equipment and full protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS: Sealed containers may build up pressure if exposed to heat (fire). Water can be used to cool the exterior of the containers.

DECOMPOSITION PRODUCTS: Oxides of carbon, nitrogen, aluminum, possible HCN, polyurethane combustion compounds and halogens.

SECTION 6 – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Cover with a layer of sand or other suitable absorbent. Use protective measures as outlined in Section 8 below. Avoid contact with eyes, skin or clothing.

SECTION 7 – HANDLING & STORAGE

Avoid contact with moisture. Isocyanates react with water and generate CO² which may rupture sealed containers. Store between 40° and 80°F.

SECTION 8 – PERSONAL PROTECTION/EXPOSURE CONTROLS

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined spaces use fresh air hood or NIOSH certified organic vapor canister unit. If used outdoors, ventilate well using a general or local exhaust ventilation.

EYE PROTECTION: Wear chemical splash goggles or face shield. Do not wear contact lenses while working with this material.

SKIN PROTECTION: Nitrile rubber gloves and apply a solvent-resistant barrier cream to areas of skin that may come in contact with this material.

OTHER PROTECTIVE EQUIPMENT: Eye wash station or fresh running water should be readily available. Wear coveralls and/or rubber apron and rubber shoes or boots.

PERSONAL HYGIENE: Wash hands thoroughly after handling and especially before eating or smoking. Shower at the end of the work shift.

Wash contaminated clothing before reuse.

SECTION 9 - PHYSICAL DATA

BOILING POINT (F)	312°	SPECIFIC GRAVITY (H ₂ O=1)	1.11
VAPOR PRESSURE	10	PERCENT, VOLATILE BY VOLUME	20%
VAPOR DENSITY (AIR=1)	<4.8	EVAPORATION RATE (N.B.A.=1)	0.2
SOLUBILITY IN WATER	Insoluble	pH (5% SLURRY)	Neutral

APPEARANCE & ODOR - Silver liquid with aromatic solvent odor

SECTION 10 – REACTIVITY DATA

STABILITY: Stable

INCOMPATABILITY (MATERIALS TO AVOID): Water (moisture); alcohols; amines; strong acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Possible HCN.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contamination with water will evolve CO².

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY: MODERATE

ACUTE INHALATION TOXICITY: MODERATE

ACUTE DERMAL TOXICITY: SLIGHT

SENSITIZATION: POSSIBLE

MUTAGENICITY: NEGATIVE

CARCINOGENICITY: NOT CLASSIFIABLE

SECTION 12 ECOLOGICAL INFORMATION

BIODEGRADATION	SLOW TO MODERATE
TOXICITY TO FISH	MINIMAL
TOXICITY TO AQUATIC INVERTEBRATES	MINIMAL
TOXICITY TO MICRO ORGANISMS	MINIMAL
ATMOSPHERIC OXIDATION OF VOLATILES	DEGRADES RAPIDLY
BIOACCUMULATION	NEGATIVE
TOXICITY TO PLANTS	MINIMAL

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.

SECTION 14 – TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Paint
HAZARD CLASS:	3
PACKING GROUP:	III
ID #:	UN 1263
RQ:	None

TRANSPORT LABELS REQUIRED: Flammable liquid. (In the U.S., this material may be re-classified as a combustible liquid and is not regulated in containers less than 119 gallons via surface transportation.)

SECTION 15 – REGULATORY INFORMATION

See reference data for individual components.



MATERIAL SAFETY DATA SHEET
U.S. Department of Labor
Occupational Safety & Health
Administration

POLAROOF RAC

SECTION 16 – OTHER INFORMATION (HMIS RATING)

Health	2
Flammability	2
Physical Hazard	1
Personal Protection	H

Disclaimer: Andek Corporation (Andek) believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the issue date of this Material Safety Data Sheet (MSDS). However, because the conditions of handling, use, and storage of these materials are beyond Andek's control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials and make no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations contained in this MSDS are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and data and to comply with all applicable international, federal, state, and local laws and regulations.



CERTIFICATE OF COMPLIANCE

This certificate is issued for the following:

APPROVAL EVALUATION OF POLAROOF RAC
ALUMINUM COATING (RAC) ROOF COATING SYSTEM
FOR USE OVER EXISTING BUR, PROTECTED METAL PANELS
AND URETHANE SPRAY FOAM ROOF COVERS

Prepared for:

Andek Corporation
PO Box 392
Morrestown, NJ 08057

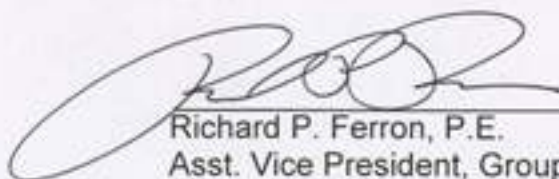
FM Approvals Class 4470

Approval Identification: 2B5A1.AM

Approval Granted: November 24, 1997

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.







*For more than 160 years FM Approvals has partnered with business and industry
to reduce property losses.*



Richard P. Ferron, P.E.
Asst. Vice President, Group Manager



PROJECT REFERENCES

	PROJECT	LOCATION	ANDEK PRODUCT USED
	U.S. Naval Research Lab	Washington DC	Polaroof NW
	Reagan National Control Tower	Reagan National Airport, Washington, DC	Polaroof AC, Wearcoat 66
	Arch Street Presbyterian Church	Philadelphia, PA	Polaprime 21, Polaroof AC
	Trump Building Wall Street (Metal roof)	New York, NY	Polaprime 21, Polaroof AC
	PA DOT-Interstate 476	Pennsylvania	Polagard AG
	McDonnell Douglas (Boeing Aerospace)	New Jersey	Polaroof RAC



John F Kennedy Airport

New York, NY

Polaroof SP, Flashband



LaGuardia Airport

New York, NY

Polaroof SP, Flashband



Throgs Neck Bridge

New York, NY

Roofdx Super, Roofab



Los Angeles Int'l Airport

Los Angeles, CA

Polaroof RAC, Roofab, Polaroof SP



PSE&G Nuclear Power Station

Salem, NJ

Andek 950, Wearcoat 66



Philadelphia Park Horse Stables

Philadelphia, PA

Polaprime 21, Polaroof AC



U.S. Air Force Airlift Command

Dover AFB, DE

Polaroof AC



U.S. Navy (Military Sealift
Command)

Norfolk, VA

Polaroof SP



Walt Disney World

Orlando, FL

Roofdx Super, Polarroof RAC, Roofab, Polarroof AC, Polarroof NW, Clearcoat 44



The Moshulu

Philadelphia, PA

Polaprime 21, Roofab, Polarroof RAC



Interstate 78

Pennsylvania

Polagard AG



Veteran's Administration Hospitals

Delaware & Palo Alto, CA

Polarroof RAC, Polarroof SP



Jazzland Amusement Park

New Orleans, LA

Polagard AG



NASA Goddard Space Flight Center

Greenbelt, MD

Polarroof RAC, Roofab



National Institutes of Health

Bethesda, MD

Cocoon 560, Cocoon Vinyl Bond B



Harrah's Casino

Atlantic City, NJ

Polaroof AC, Roofdx Copper



General Electric

Burkeville, AL

Cocoon 560, Cocoon Vinyl Bond B



Baltimore/Washington Int'l Airport

BWI Airport, MD

Polaroof NW



U.S. Department of State

Overseas Embassies

Rubberkote 1047



Princeton University

Princeton, NJ

Polaroof AC, Polaroof NW,
Wearcoat 44, Roofab



U.S. Army Corps of Engineers

Hungry Horse, MT &
Johnson Atoll

Polajoint



Dupont Corp

Richmond, VA

Polafloor PUR, Wearcoat 44,
Polafloor Epoxy Topping



Lucy the Elephant

Margate, NJ

Polaroof AC, Polaprime 21



Maryland DOT

Chesapeake House
Service Center

Polaroof AC, AIM #3



Philadelphia City Hall

Philadelphia, PA

Roofdx Super



Pfizer Pharmaceutical

Philadelphia, PA

Polafloor PUR



Philadelphia Naval Shipyard

Philadelphia, PA

Polaroof AC, Polaroof NW,
Wearcoat 44, Roofab



University of Texas

Austin, TX

Clearcoat 44



Delaware DOT

Harrington, DE

Polaroof NW



The Ritz Carlton Resort & Golf
Club

Bradenton, FL

Andek Firegard



Pennsylvania State University
Wiley Lab

State Park, PA

Cocoon 560, Cocoon Vinyl Bond B



Hershey Park

Hershey, PA

Polafloor Colorcoat



National Italian Foundation HQ

Washington D.C.

Polagard Fibrelastic



Independence Blue Cross/Blue Shield HQ

Philadelphia, PA

Roofdx Super, Polafloor PUR



U.S. Navy - Military Sealift Command

Norfolk, VA

Polaroof SP



U.S. Army

Picatinny Arsenal, NJ

Polajoint Super



Noramco Pharmaceuticals

Wilmington, DE

Polaprime 21, Polaroof NW, Clearcoat 44



U.S. Coast Guard

Cape May, NJ

Polaroof SP, Polaroof RAC, Roofab



Bank of America

Baltimore, MD

Polaprime 21, Roofdx Super, Polaroof RAC, Roofab



Blue Cross/ Blue Shield

Columbia, SC

Polagard AG



Osiris Therapeutics

Columbia, MD

Cocoon 560, Cocoon Vinyl Bond B



Delaware "Smoke House" Fire
Training Facility

Polaprime 21, Wearcoat 44



Kentucky Horse Park-Central
Show Arena Facility

Lexington, KY

Polaprime 21, Polarof NW



Triborough Bridge & Tunnel
Authority

New York, NY

Roofdx Super, Roofab, Silver Film



Druid Hill Recreation Center

Baltimore, MD

Wearcoat 44

DSET LABORATORIES

Report No.: 24327-0
Order No.: AE24327
Client Ref. No.: P.O. #387977
Date: November 7, 2007

A Division of Atlas Material Testing Technology LLC
45801 North 47th Avenue
Phoenix, Arizona 85087-7042 USA
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TOTAL EMITTANCE TEST REPORT

prepared for:

ANDEK CORPORATION
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Moorestown, NJ 08057

presented by:

Atlas Weathering Services Group
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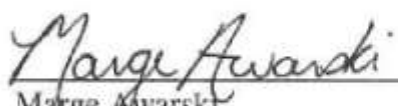
This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Atlas Weathering Services Group makes no warranty, expressed or implied, except that the test has been performed, and a report prepared, based upon the sample or samples furnished by the client. Extrapolation of data from the sample or samples relating to the batch or lot from which it was obtained may not correlate and should be interpreted accordingly with extreme caution. We assume no responsibility for variations in quality, composition, appearance, performance, or other feature of similar subject matter produced by persons or under conditions over which we have no control. This report shall not be reproduced except in full without the written approval by Atlas Weathering Services Group.

This report contains 4 pages

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Approved by:


Marge Awarski
Group Leader, Evaluation Services

TEST INSTRUMENTS GROUP

- ATLAS MATERIAL TESTING TECHNOLOGY
- ATLAS MATERIAL TESTING TECHNOLOGY GmbH

WEATHERING SERVICES GROUP

- SOUTH FLORIDA TEST SERVICE
- DSET LABORATORIES



ISO/IEC 17025
CERT #717.01

TOTAL EMITTANCE TEST REPORT

1.0 INTRODUCTION

This report presents results of total emittance measurements on nine roofing coating draw downs coded:

Polaroof NW
Polaroof RAC
Silver Film
Wearcoat 66
Wearcoat 44
Andek Firegard
Polaroof SP
Flashband Aluminum
Polaroof AC

2.0 TEST METHODS AND PROCEDURES

Near-Normal Infrared reflectance measurements were performed in accordance with ASTM E408-71 (reapproved 2002), Method A. A Gier Dunkle Instruments Infrared Reflectometer Model DB 100 was utilized for the measurements.

Inside the detector portion are two semi-cylindrical cavities. One of the cavities is heated by an electrical heater and the other stabilizes at approximately room temperature. Thus, the two cavities are maintained at different temperatures. As the cavities rotate, the sample is alternately irradiated at 13 Hz. A vacuum thermocouple views the sample through an optical system that focuses through slits in the ends of the cavities. The detector receives energy emitted by the sample and energy reflected by the sample. Only the reflected energy contains an alternating component as the sample is alternately irradiated by the hot and cold cavities. An amplifier is synchronized with the cavity rotation to pass only the desired alternating signal, which is then rectified and filtered. The zero and gain are set with standards of known emittance. The calibration is rechecked at several intervals during the measurement. The Gier Dunkle Infrared Reflectometer is calibrated using high and low emittance standards. The standards were calibrated at and obtained from the National Physical Laboratory in England. The emittance value for the glass standard equals 0.89. The emittance value for the mirror standard equals 0.01.

TOTAL EMITTANCE TEST REPORT

2.0 TEST METHODS AND PROCEDURES (cont'd)

Near-Normal Emittance for the client's specimens was calculated from Kirchhoff's Relationship where:

$$\rho + \alpha + \tau = 1, \alpha = \varepsilon$$

Since the specimens have no transmittance in the far infrared, the preceding equation reduces to

$$\rho + \varepsilon = 1 \text{ and } 1 - \rho = \varepsilon$$

3.0 OBSERVATIONS, DEVIATIONS, AND WAIVERS

The measurements were performed on the coated side of the specimens. The values reported represent the average of at least four measurements.

ANDEK CORPORATION

Report No.: 24327-0

Order No.: AE24327

Date: November 7, 2007

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TOTAL EMITTANCE TEST REPORT

4.0 RESULTS

<u>Specimen Code</u>	<u>Far IR Reflectance (ρ) Measured</u>	<u>Near Normal Emittance (ϵ) Calculated</u>
Polaroof NW	.07	.93
Polaroof RAC	.41	.59
Silver Film	.57	.43
Wearcoat 66	.08	.92
Wearcoat 44	.07	.93
Andek Firegard	.06	.94
Polaroof SP	.06	.94
Flashband Aluminum	.99	.01
Polaroof AC	.06	.94



Attn: Harvey Liss
Andek
101 Route 130 South
Adams Building Suite 100
Cinnaminson, NJ. 08077



EMSL Case No.: 361004223
Sample(s) Received: 08/23/10
Date of Analysis: 08/24/10
Date Printed: 08/24/10
Reported By: J.Newton

- Laboratory Report -

Project: Physical Testing of Polymer Sheeting

Analyzed by:

John Newton
Senior Materials Scientist

24 August 2010

Date

QA/QC:

Matthew Maki
Approved Signatory

Eugenia Mirica, Ph.D.
Laboratory Manager

24 August 2010

Date



Procurement of Samples and Analytical Overview:

The material arrived at EMSL Analytical's corporate laboratory in Westmont, NJ on 8/23/10. The package arrived in satisfactory condition with no evidence of damage to the contents. The data reported herein has been obtained using the following equipment and methodologies.

Method 1	ASTM D1004 – Tear Resistance of Plastic Film and Sheeting
Sample Size:	See ASTM D1004
Grip Type:	Barrel Friction Grips
Test Speed:	2 in/min.
End Condition:	20% loss from peak force
Measurement Device:	Tinius Olson H5KS Testing Machine
Temperature:	22°C
Humidity:	50% RH
Method 2	ASTM D2240 – Durometer Hardness – Shore A
Sample Size:	1" x 1" multiple plies to achieve method minimum thickness
Grip Type:	Indenter Tip Type A
Test Speed:	N/A
End Condition:	End of measurement
Measurement Device:	Tinius Olson H5KS Testing Machine
Temperature:	22°C
Humidity:	50% RH



Results and Discussion:

ASTM D2240 – Durometer Hardness Shore A

Sample ID	Description	Measurement	Shore A	Comments
1	Polymer Sheeting	25.3	69.8	
		25.9	68.5	
		25.8	68.7	
		25.1	70.2	
		25.4	69.6	
		25.8	68.7	
	Average:	25.6	69.3	

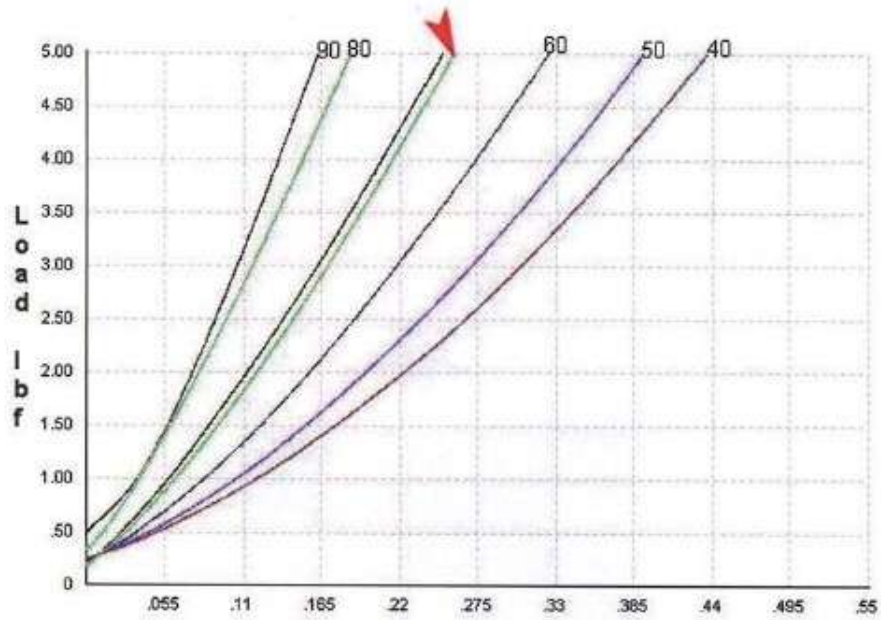


Figure 1: Durometer reading for the sample (arrow) vs. standard reference materials.



ASTM D1004 – Tear Resistance

Sample ID	Description	Force (lb)	Comments
1	Polymer Sheeting	9.03	
		8.54	
		9.01	
		8.61	
		8.41	
		8.44	
	Average:	8.67	

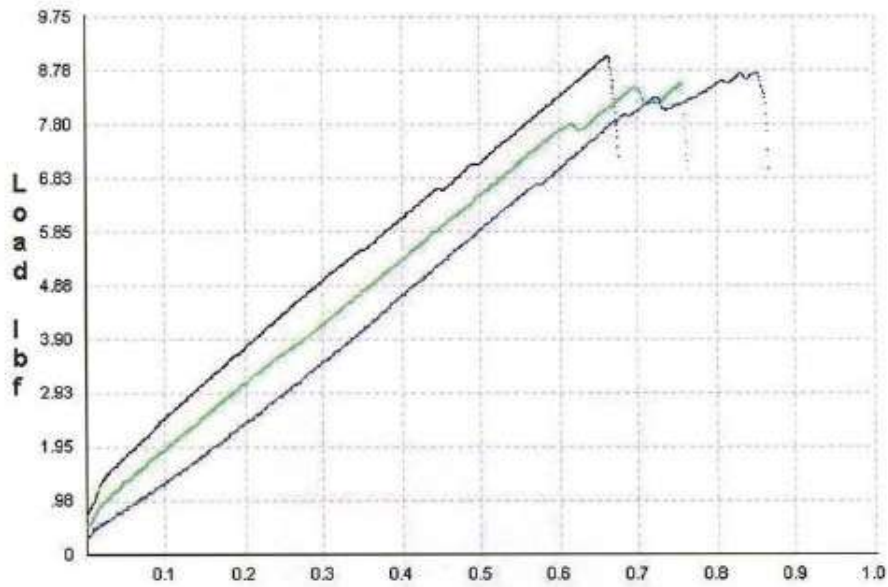


Figure 1: Tear resistance reading for the sample showing the average, upper limit and lower limit.



Descriptions & Definitions:

None Detected (ND) denotes the absence of an analyte in the subsample analyzed. Trace levels of the analyte may be present in the sample below the limit of detection (LOD).

Limit of Detection (LOD): The minimum concentration that can be theoretically achieved for a given analytical procedure in the absence of matrix or sample processing effects. Particle analysis is limited to a single occurrence of an analyte particle in the sub-sample analyzed.

Limit of Quantitation (LOQ): The minimum concentration of an analyte that can be measured within specified limits of precision and accuracy during routine laboratory operating conditions

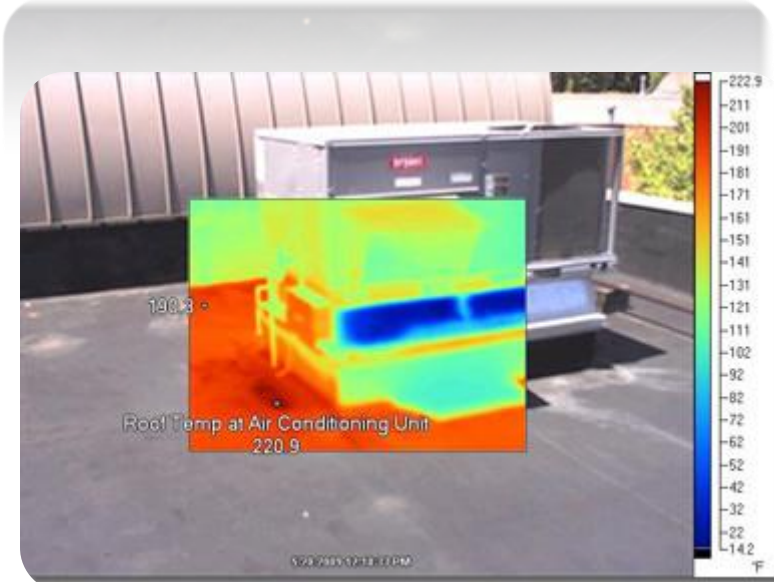
Terms, Conditions, and Limitations:

1. Sample Retention: Samples analyzed by EMSL will be retained for 60 days after analysis date. Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling may be returned to the client immediately. EMSL reserves the right to charge a sample disposal fee or return samples to the client.
2. Change Orders and Cancellation: All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL is not responsible for holding times that are exceeded due to such changes.
3. Warranty: EMSL warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.
4. Limits of Liability: In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder.

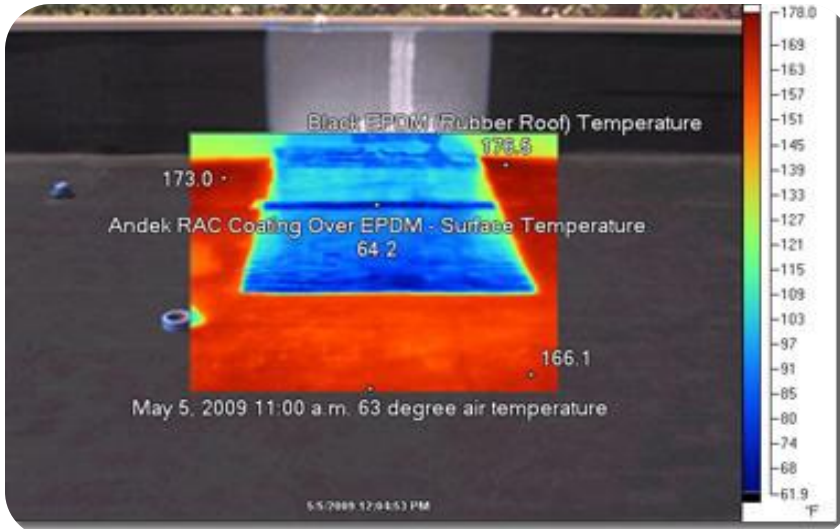
These photographs and thermal images show the significant differences between regular EPDM roofing that has been coated with Polarroof RAC and surface that is uncoated. The dramatic differences show the ability of Polarroof RAC to reflect heat off of the roof. Another interesting observation was the temperature difference between uncoated EPDM roof and an area that had been coated with a white product, one can draw ones own conclusion.



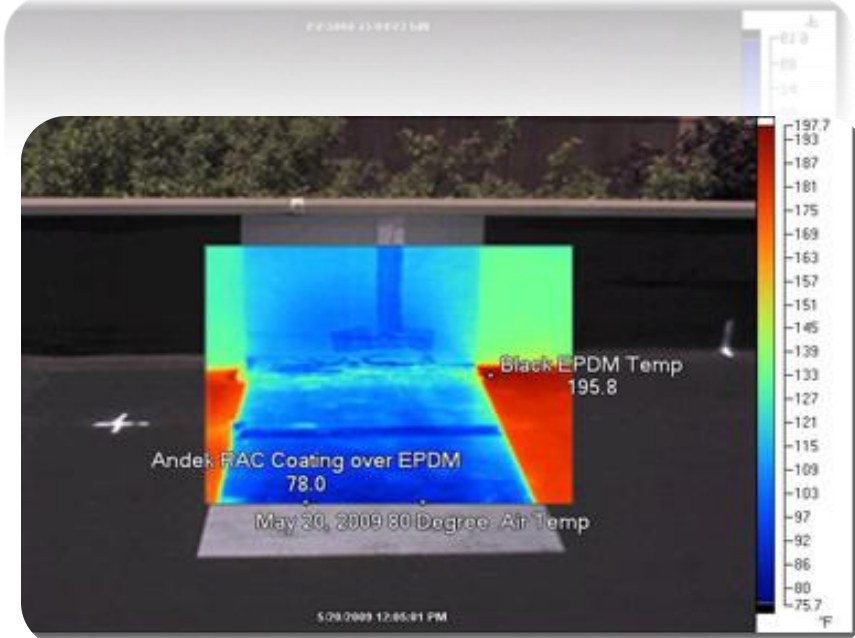
The base of the roof at this time has not been coated with Polarroof RAC.



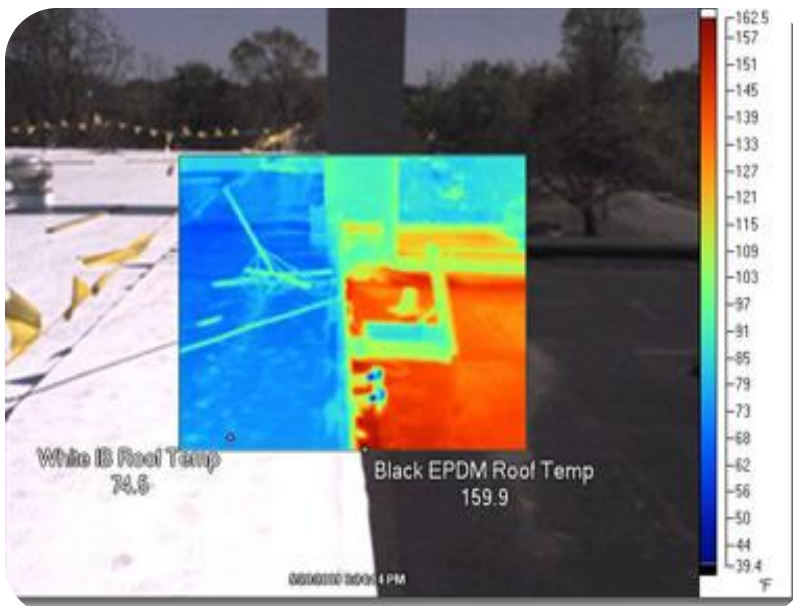
The temperature at the base of this air conditioning unit (220.9° F) was greater than the boiling point of water (212° F).



A significant difference between the Polarroof RAC coated EPDM and the uncoated area, over 100°F



Interestingly enough, the surface temperature of the Polarroof RAC is 2° F lower than the air temperature



The dirty white surface showed less contrast to the black EPDM than with the Polarroof RAC. Only 115% as opposed to 151% reduction with the Polarroof RAC coated EPDM.

