



Stars Management DMCC

SUBMITTAL

ROOFDX SUPER
(Membrane Coating)

ROOFDX SUPER™

Urethane Waterproofing Coating



DESCRIPTION

ROOFDX SUPER is a single component urethane especially designed as a waterproofing membrane for all kinds of roofing. It cures to form a tough, elastic, waterproof seal and may be incorporated into roofing specifications that provide roof protection of 10 and 20 years.

ROOFDX SUPER contains corrosion-inhibiting pigments and will protect metals against rust and acid rain.

OUTSTANDING FEATURES

- Extremely chemical resistant to oils, fats, acids, and other pollutants
- Saturates easily into reinforcing fabrics and coats evenly over irregular surfaces
- Remains flexible at low temperatures; will not flow at high temperatures
- Effective protection for all climatic extremes over long periods of time
- Exhibits good adhesion to asphalt or coal tar, BUR, Modified, zinc, copper, steel, lead, aluminum, tin, E.P.D.M., concrete, and asbestos cement
- Provides a high quality membrane without pinholes, fishmouths, blisters or imperfections that result in weakness

APPLICATION

Surfaces must be dry, free of dirt, loose debris, grease, oil, or any substance that could interfere with adhesion. Refer to Polaprime data sheet for information regarding selection of appropriate primer if necessary. Application over seams in metal roofs is achieved by embedding 4" or 6" wide Roofab into a fresh coat of ROOFDX SUPER 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 ROOFDX SUPER that they are encapsulated to the point of rundown. As soon as the ROOFDX SUPER has dried, it may be coated with Silver Film or other compatible topcoat.

Application over built-up or modified asphalt roofs requires good

preparation as described above. If gravel is present, this should be removed by wet-vac or scraped off and pressure washed. Buildkote or compatible flood coat should be installed to soften the profile of embedded gravel. If the surface is slicktop, capsheet, or re-saturated, this should be vacuumed, blown or pressure washed until clean and, if excessively porous, primed with Polaprime 2. Application of ROOFDX SUPER may proceed by embedding 40" Roofab into a fresh coat of ROOFDX SUPER applied 1½ gallons per roofing square (66 sq. ft. per gallon); the fabric should be smoothed out without stretching so that it conforms to the surface without voids, tents or dry spots. Begin at the lowest point of the roof and each roll saturated with an even coat of ROOFDX SUPER at 1½ gallons per roofing square (66 sq. ft. per gallon) as soon as the first coat has soaked up and no wrinkles remain.

SPECIFICATIONS	
Coating	Moisture-cure urethane
VOC	100 gms/liter
Pot Life	Single component
Shelf Life	24 months
Recommended Thickness	30 mils dry film thickness
Coverage	55 square feet per gallon
Packaging	5 gallon pails
Color	Black

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Enough material should be present at the overlap that saturation occurs completely without fish-mouths or dry spots. Continue application with laps facing downhill to shed water if work is interrupted by precipitation. Sudden precipitation will not wash ROOFDX SUPER off when wet or newly applied, but will produce a mottled, dull appearance that is not detrimental to overall performance. ROOFDX SUPER may be used as an adhesive at loose edges and will form all flashings and joints with the Roofab. Black surfaces, by their nature, will absorb heat; this heat buildup causes expansion, followed by contraction as the surface cools. This

constant expansion and contraction causes fatigue of the substrate including the roof beams, fasteners, and other building components. To reduce the intensity of this cyclic fatigue and to reduce demand for air conditioning by lowering temperatures, a coat of Silver Film or other compatible solar-reflective roof coating is recommended. Clean equipment with xylene or aromatic naphtha.

MAINTENANCE

Damaged areas may be repaired by cleaning surface and application of ROOFDX SUPER and Roofab as described in the Application section.

PRECAUTIONS

Contains solvents and reactive isocyanates. Do not get on skin or eyes. Do not ingest or inhale vapor. Make sure vapor does not enter building. If skin is contaminated, use suitable cleanser; if eyes are contaminated, wash with water for 15 minutes and seek medical attention. If ingested, do NOT induce vomiting and seek immediate medical attention.

For more information, call our Technical Department.

Keep out of reach of children and pets.

TECHNICAL DATA		
Moisture Vapor Transmission	0.7 perms	ASTM E-96
Tensile Strength	600 psi	ASTM D-412
Elongation	350%	ASTM D-412
Flexibility at Low Temperature	180 deg. bend @ -10°F	ASTM C-711
Shore 'A' Hardness	55 degrees	ASTM D-2240
Puncture Resistance	120 psi	ASTM D-154-79
Viscosity at 70°F	6,000 cps	ASTM D-446
Drying Time @ 80°F (70% R.H.)	24 hrs (to walk on)	
Total Cure @ 80°F (70% R.H.)	72 hrs (to 55 deg. Shore 'A')	
Application Equipment	Brush, Roller or Spray	
Cleaning of Equipment	Xylene or Aromatic Naptha	

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

ROOFDX SUPER

SECTION 1 - IDENTIFIERS

MANUFACTURER: Andek Corporation
ADDRESS: 850 Glen Avenue, Moorestown, NJ 08057
TELEPHONE: 1-856-786-6900
In an emergency, contact CHEMTREC 1-800- 424-9300;
Outside the United States call +1-703-527-3887
TRADE NAME: RoofdX Super
CHEMICAL FAMILY: Urethane Prepolymer Solution

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:

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
Iron Oxide	1309-37-1	16.2	
Barium Sulfate	7727-43-7	13.8	
Naphtha, Light Aromatic Solvent	64742-95-6	10.0	
Chlorinated Paraffin	8002-74-2	16.2	
Methylene Bisphenyl Isocyanate	101-68-8	2.8	
Polyether Prepolymer (Isocyanate Solution)boiling point <300°C; flash point >23°C)	N.O.S.	31.5	
Aromatic Hydrocarbon Resin	64742-90-1	9.5	

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 immediate medical attention.

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

Cover with a layer of sand or other suitable absorbent. Use protective measures as outlined under 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)	1.2
VAPOR PRESSURE	10	PERCENT, VOLATILE BY VOLUME	13.7
VAPOR DENSITY (AIR=1)	<4.8	EVAPORATION RATE (N.B.A.=1)	0.2
SOLUBILITY IN WATER	Insoluble	pH (5% SLURRY)	Neutral

APPEARANCE & ODOR - Black liquid with aromatic solvent odor.

SECTION 10 – REACTIVITY DATA

STABILITY: Stable.

INCOMPATIBILITY (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
MUTAGENICTY	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.



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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.









ROOFDX SUPER has been used to embed the ROOFAB here on a concrete roof deck. The top coat is POLAROOFF RAC (silver).



Here, ROOFDX SUPER and ROOFAB has been used to provide a waterproof membrane to the concrete curb. Andek POLAJOINT was used to set and seal the posts.



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

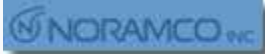
Polaroof SP

Picatinny

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