



*Stars Management DMCC*

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**SUBMITTAL**

**POLAJOINT**

**SUPER**

**(Polyurethane Sealant)**

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# POLAJOINT SUPER™

## Polyurethane Sealant



### DESCRIPTION

POLAJOINT SUPER is a 100% solids, polyurethane sealant that forms a flexible, elastic, chemical-resistant seal. POLAJOINT SUPER may be used in concrete, steel, or composite junctions and transitions. This product is designed to prevent the penetration of fluids through joints where movement may be anticipated.

### OUTSTANDING FEATURES

- Excellent chemical resistance to solvents, corrosives, oils, and salts
- High modulus, good elasticity, with rapid recovery and excellent fatigue resistance
- Superior mechanical properties with good resistance to impingement
- Provides good barrier properties to penetration by aqueous and non-aqueous fluids
- Good resistance to U.V. and thermal oxidative degradation
- Persistent adhesion to concrete, steel, and mineral composites under stress and shear conditions
- Pourable and self-leveling in horizontal joints
- May be modified with K-CATALYST for application into vertical joints

### APPLICATION

Caution! Read this entire data sheet before continuing.

All surfaces to be coated must be dry and free of loose debris, oils, paints, grease, and other substances that would interfere with proper bond. Irregular width joints may need to be modified by grinding out to sufficient width to provide for modulus of elasticity. Shallow joints should have a bond breaker base of silicone tape or equivalent. Deep joints should be filled with backer rod or foam prior to sealing with POLAJOINT SUPER. Substrates that have insufficient cohesive strength, or may have been corroded, should be reinforced with a penetrating treatment of POLAPRIME 21. Horizontal joints should be sealed with normal unmodified POLAJOINT SUPER. Open the 'B' side container first and mechanically stir until all

of the pigment has been brought up from the bottom and the contents are thoroughly homogeneous. Open and pour the 'A' side (hardener) into the 'B' side container and mechanically stir until completely mixed, at least 3 minutes. Pour out the mixture into the joint so that the entire contents are dispersed along the area to be sealed. This provides maximum working time as the exotherm generated by curing is dissipated into the substrate. Overfills and spills should be corralled back into the joint with a spatula. Underfills and pockets should be topped off until it cures. Putty dams may need to be installed to hold the mixture in place so that it does not outflow.

Vertical joints should be sealed with POLAJOINT SUPER modified with K-CATALYST. Open the 'B' side container first and mechanically stir until all of the pigment has been

SPECIFICATIONS	
Sealant Type	2k M.I.O. Polyurethane
VOC	Negligible
Pot Life	45 minutes @ 70°F
Shelf Life	12 months
Recommended Thickness	1/2" wide x 1/2" deep
Coverage	125 lineal feet per 11-lb unit
Packaging	12 pound (5 kilo) units
Color	Metallic Black

# POLAJOINT SUPER™

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brought up from the bottom. Add the K-CATALYST and mechanically stir until a heavy paste has been achieved and then open the container of 'A' side (hardener), stirring in thoroughly for at least 3 minutes. The mixture may be applied into the joint using a spatula, trowel, pump, refillable caulk gun, or other appropriate tool, following the same procedures as regular unmodified POLAJOINT SUPER.

### LIMITATIONS

Joint design may need modification to provide maximum longevity of sealant performance.

### PRECAUTIONS

Read the M.S.D.S. in its entirety. Gloves, goggles, and barrier cream must be worn during application. Remove skin contamination as soon as possible with a resin remover. In case of eye contact,

flush with clear water for 15 minutes and seek medical attention. If ingested, seek immediate medical attention.

**Keep out of reach of children and pets.**

For more information, call our Technical Department.

TECHNICAL DATA		
<b>Working Time</b>	45 minutes @ 70°F	
<b>Cure Time</b>	12 hours @ 70°F	
<b>Total Solids Content (B.W.)</b>	100%	ASTM D-1044
<b>Shore 'A' Hardness</b>	85	ASTM -D-2240
<b>Water Absorption</b>	Zero	ASTM D570-77
<b>Specific Gravity</b>	1.08	ASTM D-792
<b>Chemical Resistance</b>	See lab report for this product	
<b>Elongation</b>	300%	ASTM D-412
<b>Tensile Strength</b>	2,000 psi	ASTM D-412

*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.*

Effective Date: 11/2012

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

**POLAJOINT SUPER – PART A**

**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: Polajoint Super Part A  
CHEMICAL FAMILY: 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. Causes skin and eye irritation and/or burns. May cause allergic skin reaction or skin sensitization. May cause respiratory tract irritation, allergic reaction, or sensitization. Causes severe gastrointestinal damage if swallowed.

Effects of Overexposure:

SKIN: Contact may irritate skin.  
EYES: Contact may cause severe damage. Vapor may irritate.  
BREATHING: Inhalation may cause headache, dizziness, nausea and irritation. May cause respiratory distress.  
SWALLOWING: May cause abdominal pain, nausea, vomiting, and diarrhea.

**SECTION 3 - COMPOSITION**

<u>COMPONENT</u>	<u>CAS #</u>	<u>APPROX %</u>	<u>TLV</u>
Methylene Bisphenyl Isocyanate	101-68-8	100	

KNOWN CARCINOGENS OR MUTAGENS - TYPE & DEFINITION – None known

**SECTION 4 – FIRST AID MEASURES**

SKIN: Clean thoroughly with pumice-based hand cleaner, followed by soap and water.  
EYES: Flush with plenty of water and seek medical attention immediately.  
BREATHING: Remove to fresh air. If asthmatic conditions occur, call a physician.  
SWALLOWING: Induce vomiting ONLY if large quantities are ingested; seek medical attention.

**SECTION 5 – FIRE & EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): 305°F. Closed Cup (ASTM D50).  
FLAMMABLE LIMITS: N/A  
EXTINGUISHING MEDIA: Dry chemical; CO<sub>2</sub>; water-spray; foam.  
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must be equipped to prevent breathing of vapors or products of combustion - must wear self-contained breathing apparatus.  
UNUSUAL FIRE & EXPLOSION HAZARDS: Avoid moisture contamination in closed containers. Reaction with moisture will generate CO<sub>2</sub> which may rupture the containers.  
DECOMPOSITION PRODUCTS: Oxides of carbon and nitrogen.

**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 prolonged or repeated contact with skin. Avoid contact with moisture. Do not use in confined areas without adequate ventilation.

**SECTION 8 – PERSONAL PROTECTION/EXPOSURE CONTROLS**

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined spaces, use air hood or NIOSH certified organic vapor canister unit.  
EYE PROTECTION: Safety goggles or face shield.  
SKIN PROTECTION: Nitrile rubber gloves.  
OTHER PROTECTIVE EQUIPMENT: Coveralls and/or rubber apron, rubber shoes or boots.  
PERSONAL HYGIENE: Wash thoroughly after application.

**SECTION 9 - PHYSICAL DATA**

BOILING POINT (F)	350°	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	1.06
VAPOR PRESSURE	0.011	PERCENT, VOLATILE BY VOLUME	Zero
VAPOR DENSITY (AIR=1)	ND	EVAPORATION RATE (N.B.A.=1)	Zero
SOLUBILITY IN WATER	Insoluble (reacts)	pH (5% SLURRY)	7.0

APPEARANCE & ODOR - Dark yellow transparent liquid with sharp 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 CO<sub>2</sub>.

**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
TOXICITY TO FISH	Minimal
TOXICITY TO AQUATIC INVERTEBRATES	Minimal
TOXICITY TO MICRO ORGANISMS	Moderate
ATMOSPHERIC OXIDATION OF VOLATILES	Not Applicable
BIOACCUMULATION	Negative
TOXICITY TO PLANTS	Minimal

**SECTION 13 – DISPOSAL CONSIDERATIONS**

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

**SECTION 14 – TRANSPORT INFORMATION**

PROPER SHIPPING NAME:	Paint
HAZARD CLASS:	None
PACKING GROUP:	N/A
ID#:	N/A
RQ:	N/A

TRANSPORT LABELS REQUIRED: This material is not regulated by the D.O.T.

**SECTION 15 – REGULATORY INFORMATION**

See reference data for individual components.

**SECTION 16 – OTHER INFORMATION (HMIS RATING)**

Health	2
Flammability	1
Physical Hazard	1
Personal Protection	H

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

**POLAJOINT – PART B**

**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: Polajoint - Part B  
CHEMICAL FAMILY: Cycloaliphatic Amine Hardener

**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. Causes skin and eye irritation and/or burns. May cause allergic skin reaction or skin sensitization. May cause respiratory tract irritation or skin sensitization. May cause respiratory tract irritation, allergic reaction, or sensitization. Causes severe gastrointestinal damage if swallowed.

Effects of Overexposure:

SKIN: Prolonged or repeated contact may cause skin irritation and/or result in skin sensitization or other allergic response.  
EYES: Irritation and redness from direct eye contact  
BREATHING: High temperatures may yield irritating fumes.  
SWALLOWING: Low acute oral toxicity (LD50 greater than 2,000 Mg/kg for rats).

**SECTION 3 - COMPOSITION**

COMPONENT	CAS #	APPROX %	TLV
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	>=30 - <=60	
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer	68609-08-5	>=15 - <=40	
Benzyl Alcohol	100-51-6	>=30 - <=60	

**SECTION 4 – FIRST AID MEASURES**

SKIN: Wash thoroughly with soap and water. Launder clothes before reuse.  
EYES: Irrigate with water for 15 minutes and seek medical attention.  
BREATHING: Move victim to fresh air. If effects occur, consult medical personnel.  
SWALLOWING: Induce vomiting if large amount ingested. Low toxicity, no specific antidote.

**SECTION 5 – FIRE & EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): 485°F (Pensky Martens Closed Cup)  
FLAMMABLE LIMITS: N/A  
EXTINGUISHING MEDIA: CO<sub>2</sub>, dry chemical.  
SPECIAL FIRE FIGHTING PROCEDURES: Standard  
UNUSUAL FIRE & EXPLOSION HAZARDS: None  
DECOMPOSITION PRODUCTS: Thermal decomposition yields oxides of carbon and nitrogen.

**SECTION 6 – SPILL OR LEAK PROCEDURES**

Contain spill with absorbent material. If necessary, soak contaminated area with a 5% acetic acid and wash with water. Clean up area may be slippery; if so, spread sand or grit.

**SECTION 7 – HANDLING & STORAGE**

Store in a dry area away from heat. Keep container sealed until ready for use.

**SECTION 8 – PERSONAL PROTECTION/EXPOSURE CONTROLS**

RESPIRATORY PROTECTION (SPECIFY TYPE): During mixing, a NIOSH approved dust mask should be worn, otherwise unnecessary.  
EYE PROTECTION: Safety glasses with side shields.  
SKIN PROTECTION: Rubber or polyethylene gloves.  
OTHER PROTECTIVE EQUIPMENT: Adequate clothing to prevent direct contact to skin.  
PERSONAL HYGIENE: . Wash thoroughly after use.

**SECTION 9 - PHYSICAL DATA**

BOILING POINT (F)	Decomposes	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	1.1
VAPOR PRESSURE	N/A	PERCENT, VOLATILE BY VOLUME	None
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (N.B.A.=1)	None
SOLUBILITY IN WATER	Insoluble	pH (5% slurry)	7.5

APPEARANCE & ODOR - Clear liquid with slight ammoniacal odor.

**SECTION 10 - REACTIVITY DATA**

STABILITY: Stable.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal conditions.

HAZARDOUS POLYMERIZATION: May not occur.

CONDITIONS TO AVOID: Avoid excessive heating over a long period of time. When large quantities are mixed, high exotherm may result. Avoid mixing with water.

**SECTION 11 TOXICOLOGICAL INFORMATION**

ACUTE ORAL TOXICITY	Moderate
ACUTE INHALATION TOXICITY	Harmful
ACUTE DERMAL TOXICITY	Harmful
SENSITIZATION	Sensitizing
MUTAGENICITY	Not Listed
CARCINOGENICITY	Not Classifiable

**SECTION 12 ECOLOGICAL INFORMATION**

BIODEGRADATION	Not Readily
TOXICITY TO FISH	Moderate
TOXICITY TO AQUATIC INVERTEBRATES	Moderate
TOXICITY TO MICRO ORGANISMS	Moderate
ATMOSPHERIC OXIDATION OF VOLATILES	None
BIOACCUMULATION	Unknown
TOXICITY TO PLANTS	Moderate

**SECTION 13 – DISPOSAL CONSIDERATIONS**

Dispose of in accordance with existing local, state and federal environmental regulations in approved metal containers.

**SECTION 14 – TRANSPORT INFORMATION**

Proper Shipping Name:	Corrosive Liquid N.O.S. (contains isophorone diamine modified aliphatic amine)
Hazard Class:	8
Packing Group:	III
ID #:	UN 1760
RQ:	None

Transport Labels Required: Corrosive Liquid

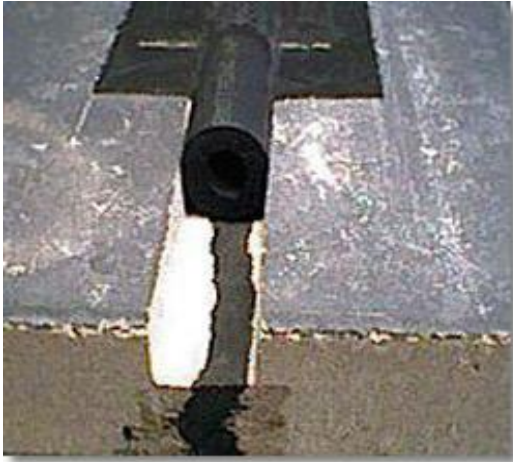
**SECTION 15 – REGULATORY INFORMATION**

See reference data for individual components.

**SECTION 16 – OTHER INFORMATION (HMIS RATING)**

Health	2
Flammability	1
Physical Hazard	1
Personal Protection	H

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The following photos illustrate a concrete deck that had cracked.

There was a need to seal the crack and form an "expansion joint" to accommodate the constant movement.



POLAJOINT SUPER was mixed and poured into the crack after a 1 1/2" wide x 3/4" deep saw-cut was made to open the surface up.









A 1 1/2" diameter backer rod or pipe wrap was then used to create a convex ridge above the surface. 4" wide ROOFAB was then used with ROOFDX SUPER to place a tough waterproof seal over the length of the joint. Expansion and contraction of the slab can now be accommodated.





## 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

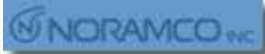
Polaroof SP

**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