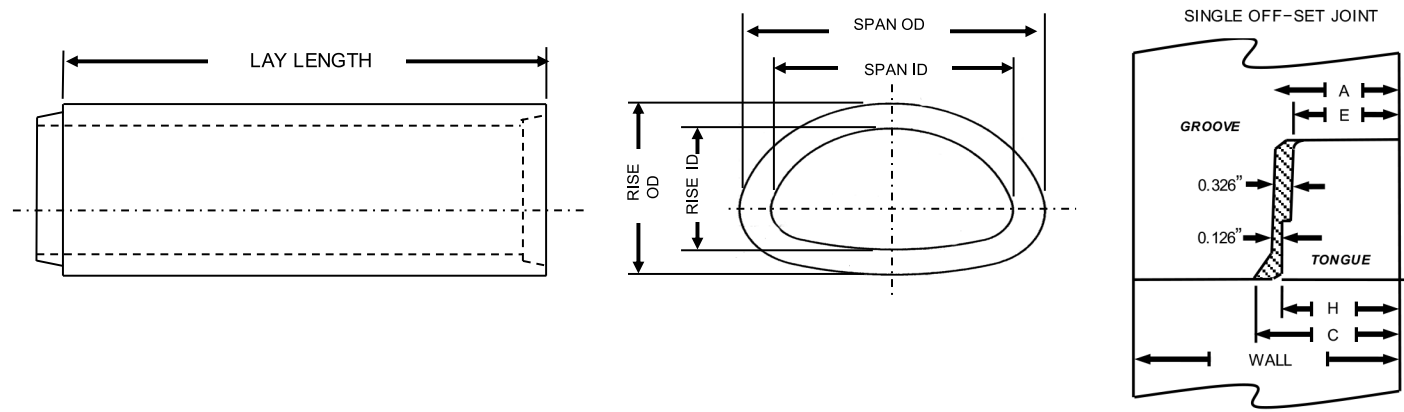




Reinforced Concrete Arch Pipe

ASTM C-506

Round Pipe Size Equivalent (IN) & DES #	Inside Dimensions Rise (IN) X Span (IN)	Wall Thickness (IN)	Outside Dimensions Rise (IN) X Span (IN)	Weight (LBS/JOINT)	Lay Length (FT)	Joint Dimensions (IN)			
						A	C	E	H
18 DES. 1 TONGUE & GROOVE	13.5 x 22	3.375	20.25 x 28.75	1,880	8	1.576	1.75	1.25	1.5
24 DES. 3 SINGLE OFF-SET	18 x 28.5	3.75	25.5 x 36.00	2,650	8	1.826	2.279	1.5	1.814
30 DES. 4 SINGLE OFF-SET	22.5 x 36.25	4.25	31.00 x 44.75	3,750	8	1.924	2.377	1.598	1.912
36 DES. 5 SINGLE OFF-SET	26.625 x 43.75	4.75	36.125 x 53.25	4,950	8	2.049	2.502	1.723	2.037



NOTES:

1. Pipe shall be made in accordance with ASTM C506.
2. Minimum concrete design strength 4,000 PSI @ 28 days.
3. Steel reinforcing cage configuration may vary but all required areas will be met.

Section I - Product and Company Identification					
Material Identity (Trade Names): Concrete Pipe and Box					
Manufacturer's Name: AmeriTex Pipe			Emergency Telephone Number: 830.372.2300		
Address: 3960 Hwy 90 East Seguin, TX 75155			Telephone Number for Information: 830.372.2300		
Section II - Hazardous Ingredients/Identity Information					
Hazardous Components (Chemical Identity/Common Names)	CAS No.	OSHA PEL	ACGIH TLV	MSHA PEL	%
Quartz (SiO ₂) $\frac{10\text{mg}/\text{M}^3}{\% \text{SiO}_2 + 2}$ (as free Crystalline Silica)					
Section III - Physical/Chemical Characteristics					
Boiling Point	N/A	Specific Gravity (H ₂ O = 1)		N/A	
Vapor Pressure (mm Hg)	N/A	Melting Point		N/A	
Vapor Density (Air = 1)	N/A	Evaporation (Butyl Acetate = 1)		N/A	
Solubility in Water:	Not Soluble				
Appearance and Odor:	Odorless Solid				
Section IV - Fire and Explosion Hazard Data					
Flash Point: Not Combustible	Flammable Limits: Not Flammable		LEL: N/A	UEL: N/A	
Extinguishing Media: This material is noncombustible. Use extinguishing media appropriate to surrounding fire.					
Unusual Fire and Explosion Hazards: None					
Section V - Reactivity Data					
Stability:	Unstable		Conditions to Avoid: None		
	Stable	X			
Incompatibility (Materials to Avoid): None					
Hazardous Decomposition or Byproducts: None					
Hazardous Polymerization: Not known to occur					
Section VI - Health Hazard Data					
Route(s) of Entry: Inhalation? yes Skin? no Ingestion? yes					
Health Hazards: Sawing or grinding may result in release of dust particles which may cause minor irritation of the eyes or nose.					
Chronic Effects: Result in lung disease (Silicosis) if exposed to excessive amounts for prolonged periods.					
Section VI - Health Hazard Data (continued)					
Carcinogenicity:	NTP no	IARC Monographs no		OSHA Regulated no	
Signs and Symptoms of Exposure: Irritation of the eyes and nose, shortness of breath.					
Medical Conditions Generally Aggravated by Exposure: Pre-existing lung disease such as Emphysema or Asthma.					
Emergency and First-Aid Procedures:					
Eyes: Flush eyes generously with water for 15 minutes. If irritation persists, contact a physician.					
Inhalation of Dust: Remove exposed person to fresh air and support breathing as needed. Consult a physician immediately if irritation persists.					
Section VII - Precautions for Safe Handling and Use					
Steps to Be Taken in Case Material is Released or Spilled: Sweep up and discard.					
Waste Disposal Method: Dispose of as common waste.					
Precautions to Be Taken in Handling and Storing: None					
Precautions: Wear NIOSH approved respirator and tight fitting goggles when sawing or grinding.					
Section VIII - Control Measures					
Respiratory Protection: NIOSH approved particulate respirator.					
Ventilation:	Local Exhaust:		Other:		
	Mechanical (General): In confined area.		Special:		
Skin Protection:			Eye Protection: Tight fitting safety goggles.		
Other Protective Clothing or Equipment: None					
Work/Hygienic Practices: N/A					

Disclaimer: The information contained in this Material Safety Data Sheet is based on technical data that the company believes to be accurate.

Martin Asphalt is a concrete joint sealant made with a unique blend of asphalts enriched with high-grade polymer. Available in convenient strips, Martin Asphalt is a preformed, ready-to-use, flexible gasket that provides an excellent seal for concrete pipes, culverts, manholes and other precast concrete joints.

MEETS STATE AND FEDERAL REQUIREMENTS

Martin Asphalt meets or exceeds all requirements of ASTM C 990, U.S. Federal Specifications SS-S-210A, Type 1, Rope Form and AASHTO Designation M-198 75 I, Type B. Certified to meet or exceed highway department specifications.

SAFE PREPARATION

Concrete surfaces to which sealant is to be applied must be clean and dry. Remove all mud, dirt, grease, oil and loose particles.

APPLICATION

Remove release paper from one side of sealant. Leave the outside paper in place to protect the sealant from contamination and stretching. Attach the sealant end-to-end to the leading edge of the tongue or groove of each pipe joint until a continuous gasket is established around the entire circumference of the pipe joint. Press material firmly into place through the outside paper. Remove the outside paper just prior to jointing the pipe. Avoid contaminating the exposed sealant with any foreign materials. Any contaminated sealant should be removed and replaced. Do not disturb the gasket placement. Any displaced sealant should be repositioned prior to jointing the pipes.

Read pipe manufacturer's instructions for proper pipe jointing procedures. The trench can be backfilled as soon as the joining process has been completed.

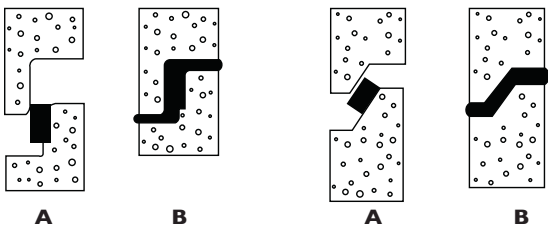
ADVANTAGES

A polymer modified sealant, Martin Asphalt offers significant advantages over non-modified sealants:

- 60% more adhesive strength
- 366% more cohesive strength
- Greater elasticity
- 40% higher ductility
- Consistent performance over a wider range of temperatures
- Provides watertight seal
- For concrete joints of all sizes and shapes
- Extruded strips for easy application
- Available in standard sizes and lengths
- Asbestos free
- Odorless
- 100% solids
- No primer necessary
- No shrinkage



Martin Asphalt-STRIPS
POLYMER MODIFIED CONCRETE JOINT SEALANT



A) Sealant Placement
B) Joint After Compression



Martin Asphalt-STRIPS

POLYMER MODIFIED CONCRETE JOINT SEALANT



Packaging (English Standard)		
Sealant Size	Pieces/Carton	FT./Carton
3/4" x 2'6"	50	125 ft
1" x 2'6"	35	87.5 ft
1" x 3'6"	35	122.5 ft
1 1/4" x 3'6"	28	98 ft
1 1/2" x 3'6"	20	70 ft
1 3/4" x 3'6"	13	45.5 ft
2" x 3'6"	10	35 ft

Packaging (Metric)		
Sealant Size	Pieces/Carton	FT./Carton
19mm x 762mm	50	38.1m
25.4mm x 762mm	35	26.7m
25.4mm x 1067mm	35	37.3m
31.75mm x 1067mm	28	29.9m
38.1mm x 1067mm	20	21.3m
44.45mm x 1067mm	13	13.9m
50.8mm x 1067mm	10	10.7m

WORKING CONDITIONS

Conditions must preclude contamination of the sealant during the installation process by any foreign material such as silt or mud.

STORAGE

Store in a dry area protected from the elements. Do not stack cartons over six high.

CLEAN UP

Scrape excess sealant off surfaces. Asphalt stains can be removed with non-hazardous, biodegradable cleaners. Use waterless hand cleaner on skin. Follow cleaner manufacturer's instructions carefully. Do not use flammable or combustible petroleum-based solvents.

Properties & Performance Data	
Bitumen, % by wt.	50-70
Inert filler content, % by wt.	30-50
Volatile matter, max. % by wt.	2.0
Properties	
Specific gravity @ 77o F/25o C, (gr/ml)	1.2-1.35
Ductility @ 77o F/25o C, (cm), min.	5.0
Min. softening point	320° F/160° C
Min. flash point, C.O.C.	600° F/315° C
Penetration @ 77o F/25o C, 150 gms, 5 sec. (dmm)	50-120
Adhesion and hydrostatic pressure	No leaks (24 hrs.)
Sag or flow resistance	No sagging
Chemical resistance	No visible deterioration



GULF STATE ASPHALT CO. L.P.
P.O. BOX 508
South Houston, Texas 77587
1-800-662-0987



MATERIAL SAFETY DATA SHEET

Manufacturer's Name: Martin Asphalt Company	Date: January, 2011
Telephone Number: 800-662-0987	Address: 300 Christy Place
For Emergency Assistance Call: (713) 941-4410	South Houston, TX 77587

NFPA HAZARD IDENTIFICATION	DEGREE OF HAZARD	HAZARD RATINGS
	HEALTH: 1 FIRE: 1 REACTIVITY: 0	0= LEAST 1= SLIGHT 2= MODERATE 3= HIGH 4= EXTREME

SECTION 1 - COMPONENT DATA	
PRODUCT NAME	EVERGRIP 990 POLYMER MODIFIED CONCRETE JOINT SEALANT
CHEMICAL NAME	PETROLEUM ASPHALT (BITUMEN)
CHEMICAL FAMILY	PETROLEUM HYDROCARBON

SECTION 2 - PHYSICAL DATA	
BOILING POINT, °F:	>900
SPECIFIC GRAVITY:	1.20-1.35
VAPOR PRESSURE (mm HG):	*ND
MELTING POINT, °F:	>320
SOLUBILITY IN WATER:	NEGLIGIBLE
VAPOR DENSITY (AIR=1):	*ND
EVAPORATION RATE (N-BUTYL) ACETATE =1):	*ND
PH:	NEUTRAL
APPEARANCE AND ODOR:	BLACK SOLID. ASPHALT ODOR.

HAZARDOUS INGREDIENTS		
COMPONENT	CAS NUMBER	PERCENT
ASPHALT	8052-42-4	55-70

SECTION 3 - FIRE AND EXPLOSION HAZARDS	
FLASH POINT AND METHOD:	>500 °F (COC)
FLAMMABLE LIMITS: % VOLUME IN AIR	LOWER: *ND UPPER: *ND
EXTINGUISHING MEDIA	DRY CHEMICAL OR FOAM PREFERRED. WATER FOG MAY BE USED ON FLAT SURFACES SUCH AS ROADS.
SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS	MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.
UNUSUAL FIRE AND EXPLOSION HAZARD	DO NOT HEAT ABOVE FLASH POINT. SULFUR OXIDES AND HYDROGEN SULFIDE, BOTH OF WHICH ARE TOXIC, MAY BE RELEASED UPON COMBUSTION. H2S VAPORS ARE HEAVIER THAN AIR, MAY ACCUMULATE IN LOW AREAS AND TRAVEL ALONG THE GROUND TO A REMOTE IGNITION SOURCE; IF IGNITED WILL FLASH BACK TO ORIGINAL CONTAINER.

*NA=NOT APPLICABLE **ND=NOT DETERMINED



SECTION 4 – REACTIVITY DATA	
STABILITY:	STABLE
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR
CONDITIONS AND MATERIALS TO AVOID	UNDER NORMAL CONDITIONS, PRODUCT IS STABLE.
HAZARDOUS DECOMPOSITION PRODUCTS	THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE, HYDROGEN SULFIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION 5 - HEALTH HAZARD DATA					
THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATIONS STANDARD (29 CFR 1910.1200)					
EYE CONTACT	BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING, PRODUCT IS PRESUMED TO BE MINIMALLY IRRITATING TO THE EYES.				
SKIN CONTACT	BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING, PRODUCT IS PRESUMED TO BE MINIMALLY IRRITATING TO THE SKIN.				
INHALATION	VAPORS (GENERATED AT HIGH TEMPERATURES) MAY CAUSE IRRITATION TO NOSE, THROAT, AND RESPIRATORY TRACT.				
SIGNS AND SYMPTOMS OF OVEREXPOSURE	IRRITATION AS NOTED ABOVE.				
AGGRAVATED MEDICAL CONDITIONS	PREEXISTING EYE, SKIN, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.				
HAZARDOUS INGREDIENT: ASPHALT	CARCINOGENICITY				
NTP LISTED	NO				
IARC LISTED	YES				
OSHA REGULATED	NO				
OCCUPATIONAL EXPOSURE LIMITS:					
	OSHA	ACGIH			
COMPONENT	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	OTHER
ASPHALT			5 MG/M ³		

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES	
EYE CONTACT	FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.
SKIN CONTACT	REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FOLLOW BY WASHING WITH SOAP AND WATER. USE OF A WATERLESS HAND CLEANER WILL HELP TO REMOVE THE PRODUCT IF NEEDED. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.
INHALATION	NOT SIGNIFICANT
INGESTION	DO NOT INDUCE VOMITING. IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.

SECTION 7 – PERSONAL HEALTH PROTECTION INFORMATION	
PROTECTIVE CLOTHING	AVOID CONTACT WITH EYES. WEAR SAFETY GLASSES OR GOGGLES, GLOVES, APRON AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO PREVENT CONTACT. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.

*NA=NOT APPLICABLE **ND=NOT DETERMINED



RESPIRATORY PROTECTION	AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS USE A NIOSH/MSHA APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.
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SECTION 8 – SPILL, LEAK & DISPOSAL PROCEDURES	
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	MAY BURN ALTHOUGH NOT READILY IGNITABLE. WEAR PROTECTIVE CLOTHING AS APPROPRIATE. DIKE AND CONTAIN. DISPOSE OF PROPERLY.
WASTE DISPOSAL METHOD	ALL DISPOSALS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THE MATERIAL, IF SPILLED OR DISCARDED, MAY BE A REGULATED WASTE. REFER TO STATE AND LOCAL REGULATIONS. CAUTION! IF REGULATED SOLVENTS ARE USED TO CLEAN UP SPILLED MATERIAL, THE RESULTING WASTE MIXTURE MAY BE REGULATED. DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS MAY APPLY FOR TRANSPORTING THIS MATERIAL WHEN SPILLED. WASTE MATERIAL MAY BE LANDFILLED OR INCINERATED AT AN APPROVED FACILITY. MATERIALS SHOULD BE RECYCLED IF POSSIBLE.

SECTION 9 - SPECIAL PRECAUTIONS/ADDITIONAL INFORMATION	
WHEN ASPHALTIC PRODUCTS ARE HEATED, THEY OFTEN GIVE OFF SMALL AMOUNTS OF HYDROGEN SULFIDE. HYDROGEN SULFIDE IS AN EXTREMELY FLAMMABLE, HIGHLY TOXIC GAS. BREATHING HYDROGEN SULFIDE MUST BE AVOIDED. MINIMIZE BREATHING OF VAPORS, FUMES, OR MIST; WHEN POSSIBLE, USE VENTILATION OR WORK UPWIND OF SOURCE OF VAPORS, FUMES AND MIST. LAUNDRY CONTAMINATED CLOTHING BEFORE USING. DISCARD LEATHER GOODS WHEN THEY CANNOT BE DECONTAMINATED. OBSERVE GOOD PERSONAL HYGIENE. WASH THOROUGHLY AFTER WORKING WITH ASPHALT AND BEFORE EATING OR SMOKING.	
D.O.T. CLASSIFICATION:	NOT REGULATED.
D.O.T. PROPER SHIPPING NAME:	POLYMER MODIFIED CONCRETE JOINT SEALANT
OTHER REQUIREMENTS:	NONE
THE COMPONENTS OF THE PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.	

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, MARTIN ASPHALT COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. THIS INFORMATION AND PRODUCT IS FURNISHED ON THE CONDITION THAT THE PERSON RECEIVING THEM SHALL MAKE THEIR OWN DETERMINATION AS TO THE SUITABILITY OF THE PRODUCT FOR THEIR PARTICULAR PURPOSE AND ON THE CONDITION THAT THEY ASSUME THE RISK OF USE THEREOF.

*NA=NOT APPLICABLE **ND=NOT DETERMINED