

CITY OF AUSTIN ELECTRIC

UTILITY DEPARTMENT

PURCHASE SPECIFICATION

FOR

**TAPE,DISTRIBUTION,OH,URD,MULTI-VOLTAGE,ELECTRICAL,FLAME
RETARDANT**

DATE	PREPARED BY	ISSUANCE/REVISION	APPROVAL PROCESS SUPV./MANAGER
6/9/15	Lee Emmick, PE	Issuance	

<i>REASON FOR REVISION</i>	<i>AFFECTED PARAGRAPHS</i>

This specification, until rescinded, shall apply to each future purchase and contract for the commodity described herein.
Retain for future reference.

1.0 SCOPE

- 1.1 The City of Austin Electric Utility Department, hereinafter referred to as Austin Energy (AE), requires a qualified Manufacturer to provide tape(s) in various sizes, thicknesses, and colors for various applications.
- 1.2 The Manufacturer of the tape(s) shall have a minimum of 5 years of experience in the manufacture of electrical tapes specified.
- 1.3 The electrical tapes will come in four (4) classes: general use, color coding for insulated cables, high strength, and all-weather. All tapes shall be; UL-listed and conform to UL-510 "Standard for Safety for Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape" (class OANZ), rated for the applicable voltage, and be flame retardant, sunlight resistant, and cold resistant as applicable.
- 1.4 Other types of tapes are included for completeness. All tapes shall be flame retardant, sunlight resistant, cold resistant, and arc resistant as appropriate.

2.0 APPLICABLE SPECIFICATIONS

- 2.1 The tapes shall conform to or exceed the applicable requirements of UL-listed, ASTM, ANSI, IEEE, NESC, and NEC including, but not limited to, the following standards and codes, latest revision:
- 2.2 UL 510 – Standard for Safety for Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape (class OANZ). Tapes shall be listed as "flame retardant", "sunlight resistant", and "cold resistant".
- 2.3 ASTM D1000 – Test Methods for Pressure-Sensitive Adhesive Coated Tapes Used for Electrical and Electronic Applications
- 2.4 ASTM D2301 – Standard Specification for Vinyl Chloride Pressure-Sensitive Electrical Insulating Tape
- 2.5 ASTM D3611 – Standard Practice for Accelerated Aging of Pressure-Sensitive Tapes
- 2.6 ASTM D3005 – Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape
- 2.7 ASTM D4325 – Standard Test Methods for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes
- 2.8 ASTM D-4514 – Standard Specification for Friction Tape

3.0 FUNCTIONAL REQUIREMENTS

- 3.1 General Use (3M/Scotch Super 33+ or Standards Engineer approved equal). (Applicable to AE Item # 15718, 5907, and 814)

3.1.1 Voltage Rating (UL 510)

600V

3.1.2 Width / Length	
3.1.2.1 (AE Stock #5907/814)	3/4" / 66 ft
3.1.2.2	1" / 36 yd*
3.1.2.3 (AE Item #15718)	1-1/2" / 36 yd
3.1.3 Backing Material	Polyvinyl Chloride (PVC)
3.1.4 Adhesive	Rubber Based
3.1.5 Temperature Rating (UL 510)	-18°C – 105°C
3.1.6 Color	Black
3.1.7 Thickness	7 mils
3.1.8 Adhesion to Steel (ASTM D1000)	
3.1.8.1 @22°C	28 oz / in
3.1.8.2 @-18°C	60 oz / in
3.1.9 Adhesion to Backing (ASTM D1000)	
3.1.9.1 @22°C	28 oz / in
3.1.9.2 @-18°C	60 oz / in
3.1.10 Backing Strength (ASTM D1000)@22°C	15 lb / in
3.1.11 Breaking Strength	17 lb / in
3.1.12 Ultimate Elongation (ASTM D1000)	
3.1.12.1 @22°C	250%
3.1.12.2 @-18°C	100%
3.1.13 Flammability (UL 510)	1 sec
3.1.14 Accelerated Aging (ASTM D3611)	80%
3.1.15 Flagging (ASTM D1000)	<0.1 in
3.1.16 Telescoping @50°C	<0.1 in
3.1.17 Dielectric Breakdown (ASTM D1000)	1150 V/mil
3.1.18 Insulation Resistance (ASTM D1000)	>1x10 ⁶ megaohms

3.1.19 Shelf Life 5 years

3.2 Color Coding (3M/Scotch 35 or Standards Engineer approved equal) (Applicable to Item #'s 18370, 15226, 18372, 15227, 18365, 15228, 18364, 15229, 18366, 15231, 18369, 15230, 18368, 15232, 18371, 15233, and 18367)

3.2.1 Voltage Rating (UL 510) 600V

3.2.2 Width / Length

3.2.2.1 3/4 in / 60 ft (Items 15XXX)

3.2.2.2 1/2 in / 20 ft (Items 18XXX)

3.2.3 Backing Material Polyvinyl Chloride (PVC)

3.2.4 Adhesive Rubber Based

3.2.5 Colors

3.2.5.1 Red (AE Item #18370/15226)

3.2.5.2 White (AE Item #18372/15227)

3.2.5.3 Blue (AE Item #18365/15228)

3.2.5.4 Yellow (AE Item #18364/15229)

3.2.5.5 Brown (AE Item #18366/15231)

3.2.5.6 Orange (AE Item #18369/15230)

3.2.5.7 Green (AE Item #18368/15232)

3.2.5.8 Violet (AE Item #18371/15233)

3.2.5.9 Gray (AE Item #18367)

3.2.6 Temperature Rating (UL 510) -18°C – 105°C

3.2.7 Thickness 7 mils

3.2.8 Adhesion to Steel (ASTM D1000) 20 oz / in

3.2.9 Adhesion to Backing (ASTM D1000) 20 oz / in

3.2.10 Breaking Strength (ASTM D1000) 17 lb / in

3.2.11 Ultimate Elongation (ASTM D1000) 225%

3.2.12 Flammability (UL 510) 1 sec

3.2.13 Accelerated Aging (ASTM D3611)	80%
3.2.14 Flagging (ASTM D1000)	<0.1 in
3.2.15 Telescoping @50°C	<0.1 in
3.2.16 Dielectric Breakdown (ASTM D1000)	8750 V
3.2.17 Insulation Resistance (ASTM D1000)	>1x10 ⁶ megaohms
3.2.18 Shelf Life	5 years

3.3 High Strength (3M/Scotch 22 or Standards Engineer approved equal)

3.3.1 Voltage Rating (UL 510)	600V
3.3.2 Width / Length	
3.3.2.1	1/2 in / 36 yd*
3.3.2.2	3/4 in / 36 yd*
3.3.2.3	1 in / 36 yd*
3.3.2.4	1-1/2 in / 36 yd*
3.3.2.5	2" / 36 yd*
3.3.3 Backing Material	Polyvinyl Chloride (PVC)
3.3.4 Adhesive	Rubber Based
3.3.5 Color	Black
3.3.6 Temperature Rating (UL 510)	-18°C – 80°C
3.3.7 Thickness	10 mils
3.3.8 Adhesion to Steel (ASTM D1000)	20 oz / in
3.3.9 Adhesion to Backing (ASTM D1000)	20 oz / in
3.3.10 Breaking Strength (ASTM D1000)	20 lb / in
3.3.11 Ultimate Elongation (ASTM D1000)	200%
3.3.12 Flammability (UL 510)	1 sec
3.3.13 Accelerated Aging (ASTM D3611)	80%
3.3.14 Flagging (ASTM D1000)	<0.1 in

3.3.15 Telescoping @ 50°C	<0.1 in
3.3.16 Dielectric Breakdown (ASTM D1000)	12000 V
3.3.17 Insulation Resistance (ASTM D1000)	>1x10 ⁶ megaohms
3.3.18 Shelf Life	5 years

3.4 All Weather (3M/Scotch Super 88 or Standards Engineer approved equal) (Applicable to Item #'s 491, 15179, 17816, and 494)

3.4.1 Voltage Rating (UL 510)	600V
3.4.2 Width / Length	
3.4.2.1 (AE Item #491/15179)	3/4 in / 36 yd
3.4.2.2	1 in / 36 yd *
3.4.2.3 (AE Item #17816)	1-1/2 in / 36 yd
3.4.2.4 (AE Item #494)	2" / 36 yd
3.4.3 Backing Material	Polyvinyl Chloride (PVC)
3.4.4 Adhesive	Rubber Based
3.4.5 Color	Black
3.4.6 Temperature Rating (UL 510)	-18°C – 105°C
3.4.7 Thickness	8.5 mils
3.4.8 Adhesion to Steel (ASTM D1000)	28 oz / in
3.4.9 Adhesion to Backing (ASTM D1000)	28 oz / in
3.4.10 Breaking Strength (ASTM D1000)	20 lb / in
3.4.11 Ultimate Elongation (ASTM D1000)	250%
3.4.12 Flammability (UL 510)	1 sec
3.4.13 Accelerated Aging (ASTM D3611)	80%
3.4.14 Flagging (ASTM D1000)	<0.1 in
3.4.15 Telescoping @50°C	<0.1 in
3.4.16 Dielectric Breakdown (ASTM D1000)	10000 V
3.4.17 Insulation Resistance (ASTM D1000)	>1x10 ⁶ mega-ohms

3.4.18 Shelf Life 5 years

3.5 Insulating Lagging Tape (Lewco Item FT60 or Standards Engineering approved equal).
(Applicable to Item # 2034 and 2035)

3.5.1 Width / Length

3.5.1.1 (AE Item #2034) 1-1/2 in / 100 ft

3.5.1.2 (AE Item #2035) 1 in / 100 ft

3.5.2 Backing Material Fiberglass

3.5.3 Adhesive Rubber Based

3.5.4 Color White

3.5.5 Temperature Rating (UL 510) up to 1100°F

3.5.6 Thickness 1/8 inches

3.5.7 Shelf Life 5 years

3.6 Aluminum Thermal (Thermon Model AL-30H or Standards Engineering approved equal).
(Applicable to Item # 13683)

3.6.1 Width / Length

3.6.1.1 (AE Item #13683) 3 in / 150 ft

3.6.2 Backing Material Aluminum

3.6.3 Adhesive Rubber Based

3.6.4 Color Silver

3.6.5 Temperature Rating (UL 510) -5°C - 150°C

3.6.6 Shelf Life 5 years

3.7 Rubber Mastic (3M #2288 or Standards Engineering approved equal). (Applicable to Item #496)

3.7.1 Voltage Rating (UL 510) 1000V

3.7.2 Width / Length

3.7.2.1 (AE Item #496) 2 in / 10 ft

3.7.2.2 2 in / 3 ft*

3.7.2.3 1 in / 10 ft*

3.7.3 Backing Material	Ethylene Propylene Rubber
3.7.4 Adhesive	Rubber Based
3.7.5 Color	Black
3.7.6 Temperature Rating (UL 510)	19°C - 90°C
3.7.7 Thickness	65 mils
3.7.8 Adhesion to Steel (ASTM D1000)	15 lb / in
3.7.9 Adhesion to Backing (ASTM D1000)	200 oz / in
3.7.10 Breaking Strength (ASTM D1000)	20 lb / in
3.7.11 Ultimate Elongation (ASTM D1000)	1000%
3.7.12 Dielectric Breakdown (ASTM D1000)	500 V/mil
3.7.13 Shelf Life	5 years

3.8 Insulating Putty (3M Scotchfil or Standards Engineering approved equal). (Applicable to Item #495)

3.8.1 Voltage Rating (UL 510)	600V
3.8.2 Width / Length	
3.8.2.1 (AE Item #495)	1-1/2 in / 1.5 m
3.8.3 Backing Material	Mastic, Putty, Rubber
3.8.4 Adhesive	Mastic
3.8.5 Color	Black
3.8.6 Temperature Rating (UL 510)	0°C – 80°C
3.8.7 Thickness	125 mils
3.8.8 Ultimate Elongation (ASTM D1000)	1000%
3.8.9 Dielectric Breakdown (ASTM D1000)	575 V/mil
3.8.10 Insulation Resistance (ASTM D1000)	>1x10 ⁶ ohms
3.8.11 Shelf Life	5 years

3.9 Silicon Rubber (3M #70 or Standards Engineering approved equal). (Applicable to Item #493)

3.9.1 Voltage Rating (UL 510)	15kV
3.9.2 Width / Length	
3.9.2.1 (AE Item #493)	1 in / 10 yd
3.9.3 Backing Material	Silicon Rubber
3.9.4 Adhesive	Self-Fusing
3.9.5 Color	Gray (Munsell 5BG7.0/0.4)
3.9.6 Temperature Rating (UL 510)	19°C - 180°C
3.9.7 Thickness	12 mils
3.9.8 Breaking Strength (ASTM D1000)	12 lb / in
3.9.9 Ultimate Elongation (ASTM D1000)	450%
3.9.10 Arc Resistance	1 min
3.9.11 Dielectric Breakdown (ASTM D1000)	875 V/mil
3.9.12 Shelf Life	5 years

3.10 Polyester Filament (3M #893 or Standards Engineering approved equal). (Applicable to Item #15238)

3.10.1 Voltage Rating (UL 510)	600V
3.10.2 Width / Length	
3.10.2.1	.35 in / 60 yd*
3.10.2.2 (AE Item #15238)	0.47 in / 60 yd
3.10.2.3	.71 in / 60 yd*
3.10.2.4	.94 in / 60 yd*
3.10.2.5	1.4 in / 60 yd*
3.10.2.6	1.9 in / 60 yd*
3.10.2.7	.47 in / 360 yd*
3.10.3 Backing Material	Glass Yarn Reinforced
3.10.4 Adhesive	Rubber Resin
3.10.5 Color	Clear

3.10.6 Temperature Rating (UL 510)	19°C – 90°C
3.10.7 Thickness	6 mils
3.10.8 Adhesion to Steel (ASTM D1000)	55 oz / in
3.10.9 Adhesion to Backing (ASTM D1000)	55 oz / in
3.10.10 Breaking Strength (ASTM D1000)	300 lb / in
3.10.11 Ultimate Elongation (ASTM D1000)	4.5%
3.10.12 Shelf Life	5 years

3.11 Fiberglass (Ferro Unitape 900 or Standards Engineering approved equal). (applicable to Item #15171)

3.11.1 Voltage Rating (UL 510)	600V
3.11.2 Width / Length	
3.11.2.1	1/2 in / 36 yd*
3.11.2.2	3/4 in / 36 yd*
3.11.2.3 (AE Item #15171)	1 in / 18 yd
3.11.2.4	2 in / 18 yd*
3.11.3 Backing Material	Fiberglass / Teflon (PTFE)
3.11.4 Adhesive	Silicon
3.11.5 Color	Tan
3.11.6 Temperature Rating (UL 510)	-73°C - 260°C
3.11.7 Thickness	12 mils
3.11.8 Adhesion to Steel (ASTM D1000)	45 oz / in
3.11.9 Adhesion to Backing (ASTM D1000)	45 oz / in
3.11.10 Breaking Strength (ASTM D1000)	175 lb / in
3.11.11 Ultimate Elongation (ASTM D1000)	5%
3.11.12 Shelf Life	5 years

3.12 Varnish Cambric (3M #2510 and #2520 or Standards Engineering approved equal). (applicable to Item #15175 and #15177)

3.12.1 Voltage Rating (UL 510)	600V
3.12.2 Width / Length	
3.12.2.1 (AE Item #15177)	3/4 in / 36 yd
3.12.2.2 (AE Item #15171)	1 in / 36 yd
3.12.3 Backing Material	Cotton Cambric fabric/varnished
3.12.4 Adhesive	Resin Varnish
3.12.5 Color	Yellow
3.12.6 Temperature Rating (UL 510)	-18°C - 105°C
3.12.7 Thickness	8 mils
3.12.8 Adhesion to Steel (ASTM D1000)	13 oz / in
3.12.9 Adhesion to Backing (ASTM D1000)	8 oz / in
3.12.10 Breaking Strength (ASTM D1000)	50 lb / in
3.12.11 Ultimate Elongation (ASTM D1000)	5%
3.12.12 Dielectric Strength	800 V / mil
3.12.13 Shelf Life	5 years

3.13 Busbar Insulation (Raychem #HVBT-2-R or Standards Engineering approved equal).
(Applicable to Item #15183)

3.13.1 Voltage Rating (UL 510)	15kV
3.13.2 Width / Length	
3.13.2.1 (AE Item #15183)	2 in / 25 ft
3.13.3 Backing Material	Heat Shrink Polyolefin
3.13.4 Adhesive	N/A
3.13.5 Color	Red
3.13.6 Temperature Rating (UL 510)	-40°C - 90°C
3.13.7 Thickness	34 mils
3.13.8 Breaking Strength (ASTM D1000)	10 MPa
3.13.9 Ultimate Elongation (ASTM D1000)	300%

3.13.10 Dielectric Strength 130 kV / cm

3.13.11 Shelf Life 5 years

3.14 Glass Cloth (3M #27 or Standards Engineering approved equal). (Applicable to Item #15174)

3.14.1 Voltage Rating (UL 510) 600 V

3.14.2 Width / Length

3.14.2.1 (AE Item #15174) 1/2 in / 60 yd

3.14.3 Backing Material Glass Cloth

3.14.4 Adhesive Rubber Thermosetting

3.14.5 Color White

3.14.6 Temperature Rating (UL 510) -40°C - 150°C

3.14.7 Thickness 7 mils

3.14.8 Breaking Strength (ASTM D1000) 150 lb / in

3.14.9 Adhesion to Steel (ASTM D1000) 30 oz / in

3.14.10 Ultimate Elongation (ASTM D1000) 5%

3.14.11 Dielectric Breakdown (ASTM D1000) 3000 V

3.14.12 Shelf Life 5 years

3.15 Electrical Semi-Conducting (3M #13 or Standards Engineering approved equal). (Applicable to Item #15185).

3.15.1 Tape shall meet ASTM D-4388, Type IV rating. For use in Splicing of medium voltage electric cables.

3.15.2 Voltage Rating (UL 510) 69 kV

3.15.3 Width / Length

3.15.3.1 (AE Item #15185) 3/4 in / 15 ft

3.15.4 Backing Material Ethylene Propyl Rubber

3.15.5 Adhesive Self-Fusing

3.15.6 Color letters Black w/ "CAUTION" in white

3.15.7 Temperature Rating (UL 510)	-40°C - 90°C
3.15.8 Thickness	30 mils
3.15.9 Breaking Strength (ASTM D1000)	6 lb / in
3.15.10 Ultimate Elongation (ASTM D1000)	800%
3.15.11 Volume Resistivity (ASTM D4325)	10 ³ ohm-cm
3.15.12 Resistance (Field Tested)	10,000 ohm
3.15.13 Shelf Life	5 years

3.16 Duct Tape (3M #6969 or Standards Engineering approved equal). (Applicable to Item #15163)

3.16.1 Voltage Rating (UL 510)	N/A
3.16.2 Width / Length	
3.16.2.1 (AE Item #15163)	2 in / 60 yd
3.16.3 Backing Material scrim	Polyethylene film over cloth
3.16.4 Adhesive	Rubber
3.16.5 Color	Silver
3.16.6 Temperature Rating (UL 510)	16°C - 95°C
3.16.7 Thickness	13 mils
3.16.8 Breaking Strength (ASTM D1000)	32 lb / in
3.16.9 Adhesion to Steel (ASTM D1000)	61 oz / in
3.16.10 Ultimate Elongation (ASTM D1000)	16%
3.16.11 Shelf Life	1 year

3.17 Hi Voltage, Linerless (3M #130C or Standards Engineering approved equal). (Applicable to Item #15172/5889, 593/18214, 594)

3.17.1 Voltage Rating (UL 510)	69 kV
3.17.2 Width / Length	
3.17.2.1 (AE Item #15163/5889)	3/4 in / 30 ft
3.17.2.2 (AE Item #593/18214)	1 in / 30 ft

3.17.2.3 (AE Item #594)	2 in / 30 ft
3.17.3 Backing Material (EPR)	Ethylene Propylene Rubber
3.17.4 Adhesive	Linerless
3.17.5 Color	Black
3.17.6 Temperature Rating (UL 510)	19°C - 90°C
3.17.7 Thickness	30 mils
3.17.8 Breaking Strength (ASTM D1000)	125 lb / in
3.17.9 Ultimate Elongation (ASTM D1000)	850%
3.17.10 Dielectric Strength	750 V / mil
3.17.11 Shelf Life	5 years

3.18 Cotton Linen (CNF #6426-17 or Standards Engineering approved equal). (Applicable to Item #15237)

3.18.1 Voltage Rating (UL 510)	N/A
3.18.2 Width / Length	
3.18.2.1 (AE Item #15237)	3/4 in / 30 ft
3.18.3 Backing Material	Woven Cotton
3.18.4 Adhesive	Linerless
3.18.5 Color	White
3.18.6 Temperature Rating (UL 510)	16°C - 90°C
3.18.7 Weight	0.0034 lb / Linear yd
3.18.8 Weave Type	Plain
3.18.9 Warp Ends	46
3.18.10 Picks per inch	18
3.18.11 Shelf Life	5 years

3.19 Friction (Bulldog #8 or Plymouth/Bishop #1012 or Standards Engineering approved equal). (Applicable to Item #15170).

3.19.1 Product shall meet ASTM D-4514 – Standard Specification for Friction Tape.

3.19.2 Voltage Rating (UL 510)	N/A
3.19.3 Width / Length	
3.19.3.1 (AE Item #15170)	3/4 in / 82.5 ft
3.19.4 Backing Material	Cotton
3.19.5 Adhesive	Rubber
3.19.6 Color	Black
3.19.7 Temperature Rating (UL 510)	19°C - 90°C
3.19.8 Thickness	15 mil
3.19.9 Shelf Life	5 years

3.20 All-Metal, Open Weave (3M #24 or Standards Engineering approved equal). (Applicable to Item #492).

3.20.1 Product shall be an all metal, open weave, flat cable, shielding braid tape. Weave shall be (2) 36 AWG tinned copper conductors.

3.20.2 Voltage Rating (UL 510)	15 kV
3.20.3 Width / Length	
3.20.3.1 (AE Item #492)	1 in / 100 ft
3.20.4 Backing Material	all metal weave
3.20.5 Adhesive	Resin
3.20.6 Color	Copper
3.20.7 Temperature Rating (UL 510)	16°C - 105°C
3.20.8 Thickness	16 mil
3.20.9 Breaking Strength (ASTM D1000)	22 lb / in
3.20.10 Elongation (ASTM D1000)	70%
3.20.11 Resistivity	.092 ohm / ft
3.20.12 Shelf Life	Indefinite

3.21 Fire and Electric Arc Proofing (3M #77 or Standards Engineering approved equal).
(Applicable to Item #15180).

3.21.1 Voltage Rating (UL 510)	15 kV
3.21.2 Width / Length	
3.21.2.1 (AE Item #15180)	3 in / 20 ft
3.21.3 Backing Material	Flexible, unsupported elastomer
3.21.4 Adhesive	None
3.21.5 Color	Black
3.21.6 Temperature Rating (UL 510)	16°C - 105°C
3.21.7 Thickness	30 mil
3.21.8 Breaking Strength (ASTM D1000)	500 lb / in
3.21.9 Elongation (ASTM D1000)	150%
3.21.10 Arc Resistance	75 Cycles / half-lapped layer
3.21.11 Shelf Life	5 years

* Although not currently stocked, these items may be ordered in the future and are therefore included in the specification. These items will not be considered for review.

4.0 INSPECTION AND TESTING

4.1 Austin Energy reserves the right to visit the manufacturing facility and observe the tapes undergoing manufacturing and testing. This visit shall be at no charge to Austin Energy. Advance notice of at least two weeks shall be given to Austin Energy before the start of testing.

4.2 Testing

4.2.1 The manufacturer shall be completely and solely responsible for the performance of the product.

4.2.2 The tapes shall be tested in accordance with ASTM D1000 - Test Methods for Pressure-Sensitive Adhesive Coated Tapes Used for Electrical and Electronic Applications, ASTM D2301 – Standard Specification for Vinyl Chloride Pressure-Sensitive Electrical Insulating Tape, ASTM D3611 – Standard Practice for Accelerated Aging of Pressure-Sensitive Tapes, ASTM D4325 – Standard Test Methods for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes, ASTM D4514 – Standard Specification for Friction Tape, and ASTM D3005 – Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape as required.

- 4.2.3** Prior to acceptance Austin Energy shall receive a full test report from a reputable domestic testing lab on subject product(s). The lab shall not be affiliated directly with the manufacturer of subject product(s). Test performed on Product(s) shall be according to all applicable Standards. Test results shall be sent directly to AE Standards, at 4411B, Meinardus Dr. Austin, TX 78744. Test results shall indicate the exact product number that the tests were performed on.
- 4.2.4** The manufacturer shall furnish, at the time of bid, certification of the ratings of the tapes consisting of the values for all requirements in this specification.