



SPECIFICATION

FOR

RoHS UL PVC Insulation tube

TYPE : VIT-300(300V), VIT-600(600V)

105°C AWG24~1Inch

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1. SCOPE

this specification covers the requirements for 300V or 600V. 105°C not-heat shrinkable PVC tube used for the protection of wire connections and wire and components. (type designation :VIT-300, VIT-600)

2. REFERENCE STANDARD

UL 224 : extruded insulating tubing

CSA C22.2 NO. 198.1-M1986 : extruded insulating tubing

3. CONSTRUCTION AND MATERIALS

the insulation shall be an extruded layers of PVC compound complying with UL and CSA specification

the thickness at any point and nominal outer diameter shall be the value as shown in the attached table

the standard colors of insulation are clear,black

4. CHARACTERISTICS AND TESTS

the following item shall be carried out in accordance with UL 224

TEST		CHARACTERISTIC	TEST CONDITION
Unaged	tensile strength	min. 1.06 kgf/mm ²	room temperature. 508mm/minute
	elongation	min. 100%	
Aged	tensile strength	more than 70% of unaged value	136 °C / 7 days
	elongation	more than 70% of unaged value	
Dielectric strength		Withstand 2.5kv for : minute	-
deformation		50% maximum decrease in wall thickness	121 °C/ 1 hour
heat shock		no cracks	121 °C/ 1 hour
cold bend		no cracks	-30°C/ 1 hour
flamability		VW-1	-
longitudinal change		max. ± 10%	130°C/ 2 hour

UL file NOE218405

C-UL file NOE218405

Rating.....TYPE.....Volt(max).....Temp(max)

Cat NO. VIT-300



300V

105℃

Cat NO. VIT-600

600V

105℃

VIT-300 E218405  105℃ VW-1  105℃ PVC TYPE FT-1 LF G -DAE MYUNG-

AWG NO	Nom.I.D. (mm)	thickness		standerd length (m)
		300V 105℃	600V 105℃	
1 inch	25.4	0.76~0.85	0.76~0.95	100
7/8 inch	22.2	0.76~0.85	0.76~0.95	100
3/4 inch	19.0	0.76~0.85	0.76~0.95	100
5/8 Inch	15.9	0.68~0.76	0.68~0.95	100
9/16 Inch	14.3	0.68~0.76	0.68~0.95	150
1/2 Inch	12.7	0.56~0.70	0.60~0.70	200
7/16 Inch	11.1	0.56~0.70	0.60~0.70	300
3/8 Inch	9.53	0.56~0.65	0.60~0.70	400
0	8.25	0.43~0.55	0.56~0.70	500
5/16 Inch	7.90	0.43~0.55	0.56~0.70	500
1	7.35	0.43~0.55	0.56~0.70	500
2	6.50	0.43~0.55	0.56~0.70	500
3	5.80	0.43~0.55	0.56~0.70	500
4	5.20	0.43~0.55	0.56~0.70	500
5	4.60	0.43~0.55	0.56~0.70	500
6	4.10	0.43~0.55	0.56~0.70	500
7	3.65	0.43~0.55	0.56~0.70	500
8	3.25	0.43~0.55	0.56~0.70	500
9	2.90	0.43~0.55	0.56~0.70	500
10	2.60	0.34~0.45	0.56~0.70	500
11	2.30	0.34~0.45	0.56~0.70	500
12	2.00	0.34~0.45	0.56~0.70	500
13	1.80	0.34~0.45	0.56~0.70	1000
14	1.60	0.34~0.45	0.56~0.70	1000
15	1.45	0.34~0.45	0.56~0.70	1000
16	1.30	0.34~0.45	0.56~0.70	1000
17	1.20	0.34~0.45	0.43~0.56	1000
18	1.00	0.34~0.45	0.43~0.56	1000
19	0.90	0.34~0.45	0.43~0.56	1000
20	0.85	0.34~0.45	0.43~0.56	1000
22	0.65	0.34~0.45	0.43~0.56	1000
24	0.50	0.34~0.45	0.43~0.56	1000

File E218405

Vol 1

Issued: 2001-09-19
Revised: 2005-11-08FOLLOW-UP SERVICE PROCEDURE
(TYPE R)COMPONENT - TUBING, EXTRUDED INSULATING
(YDPU2, YDPU8)

Manufacturer: DAE MYUNG ELECTRIC
(204688-001) 401 JIWOL-RI CHOWOL-EUP
GWANGJU-SI GYEONGGI-DO 464-863 KOREA

Applicant: SAME AS MANUFACTURER
(204688-001)

Recognized Company: SAME AS MANUFACTURER
(204688-001)

This Procedure authorizes the above Manufacturer to use the marking specified by Underwriters Laboratories Inc. only on products covered by this Procedure, in accordance with the applicable Follow-Up Service Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. upon request.

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UNDERWRITERS LABORATORIES INC.



Sajeev Jesudas
Chief Operating Officer



YDPU2**September 26, 2001****Extruded Tubing, Electrical - Component****DAE MYUNG ELECTRIC****E218405****417-5 JIWOULI RD CHOWOUL-MYUN KWANGIU-KUN,
KYUNGGI-DO 464-863 KOREA**

Cat. No.	Max V	Max Temp C	Col Recognized	Max Temp Rated Oil Resistance * C	VW-1 Rated #
Polyvinyl chloride (PVC).					
VIT-300	300	105	All	—	Yes
VIT-600	600	105	All	—	Yes

*Tubing is considered to comply with the optional oil resistant requirements only if it is so marked.

#Tubing is considered to comply with the optional VW-1 flammability requirements only if it is so marked.

Marking: Company name or "E218405", catalog designation or equivalent and temperature rating in degrees C appears on tags attached to both ends of the tubing or on the shipping spool label or smallest unit container.

11/5/2001**Underwriters Laboratories Inc.****Card 1 of 2**



TSC Co., Ltd.

28-Dec-10
Polyvinyl Chloride, Flexible

Item	PVC Compound	Customer	대명전기
Grade	A480 (38% ~ 80%)	Color	NP

The Certificate of Material

Item	Input	Unit	CAS NO.	Icp Data File NO.	Issued Date	The term of validity	Remark
PVC Resin	40 ~ 70	wt %	9002-86-2	-	2010.03.24	2011.03.24	-
Plasticizer	25 ~ 35	wt %	53306-54-0	-	2010.03.10	2011.03.10	-
Stabilizer	5 ± 3	wt %	Not established	AYAA10-35322	2010.10.19	2011.10.19	-
Filler	0 ~ 20	wt %	471-34-1	-	2010.03.25	2011.03.25	-
Flame Retardant	1 ~ 3	wt %	1309-64-4	AYAA10-06457	2010.02.26	2011.02.26	-
Color M/B	1 ↓	wt %	The Certificate of Material (Pigment) 참조				

< End Of Item >

I certify that the above materials are user for the grade.

Q. A. Manager

Signed

Rhee Young-ill

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TSC Co., Ltd.

28-Dec-10
Polyvinyl Chloride, Flexible

Item	Pigment	Customer	대명전기
Grade	전 제품 공통	Color	All Color

The Certificate of Material

Item	Input	Unit	CAS NO.	ICP Data File NO.	Issued Date	The term of validity	Remark
Black	1	wt %	1333-86-4	RT10R-S2077-001-E	2010.05.20	2011.05.20	-
White	1	wt %	1317-70-0	RT10R-S2077-005-E	2010.05.20	2011.05.20	-
Red	1	wt %	7023-61-2	RT10R-S2077-006-E	2010.05.20	2011.05.20	-
Gray	1	wt %	1317-70-0	RT10R-S2077-006-E	2010.05.20	2011.05.20	-
			1333-86-4	RT10R-S2077-005-E	2010.05.20	2011.05.20	-
Green	1	wt %	1317-70-0	RT10R-S2077-005-E	2010.05.20	2011.05.20	-
			1328-53-6	RT10R-S2077-004-E	2010.05.20	2011.05.20	-
			5468-75-7	RT10R-S2077-003-E	2010.05.20	2011.05.20	-
Yellow	1	wt %	5468-75-7	RT10R-S2077-003-E	2010.05.20	2011.05.20	-
Blue	1	wt %	147-14-8	RT10R-S2077-002-E	2010.05.20	2011.05.20	-
Brown	1	wt %	1317-70-0	RT10R-S2077-005-E	2010.05.20	2011.05.20	-
			1333-86-4	RT10R-S2077-005-E	2010.05.20	2011.05.20	-
			5468-75-7	RT10R-S2077-003-E	2010.05.20	2011.05.20	-
			7023-61-2	RT10R-S2077-006-E	2010.05.20	2011.05.20	-
Clear Blue	1	wt %	1317-70-0	RT10R-S2077-005-E	2010.05.20	2011.05.20	-
			147-14-8	RT10R-S2077-002-E	2010.05.20	2011.05.20	-
Clear Brown	1	wt %	1333-86-4	RT10R-S2077-001-E	2010.05.20	2011.05.20	-
			5468-75-7	RT10R-S2077-003-E	2010.05.20	2011.05.20	-
			7023-61-2	RT10R-S2077-006-E	2010.05.20	2011.05.20	-

< End Of Item >

I certify that the above materials are user for the grade.

Q. A. Manager

Signed

Material Safety Data Sheet

1. Chemical Product And Company Identification.

- ① Product Name : A 480 (38% ~ 80%)
② Chemical Name : PVC complex mixture.
③ CAS-NO. : Mixture.
④ General Usage : Injection Molding
⑤ Creating Department : QA team / R&D team
⑥ Creating Date : 10/01/2003 Revision Date : 12/09/2010
※ The chemical name of this polymer is protected as a trade secret.

2. Composition / Information on hazardous ingredients.

Components	CAS-NO.	Contents(wt%)
PVC Resin	9002-86-2	MAX 70
Plasticizer	53306-54-0	MAX 35
Stabilizer	1592-23-0	MAX 8
	557-05-1	
	12363-58-5	
Filler	471-34-1	MAX 20
Flame Retardant	1309-64-4	MAX 3
Additive Complex.	Not established	MAX 1

3. Hazards Identification.

- ① Inhalation : Polymer granules are not respirable.
② Ingestion : Low toxicity. Not a probable route of exposure.
③ Eye : Mechanical irritation.
④ Skin : Molten polymer will produce thermal burns.

4. First Aid Measures.

- ① Ingestion : No specific intervention is indicated as compound is not likely to be hazardous by ingestion.
Consult physician if necessary.
- ② Skin Contact : The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is adviseable.
If molten polymer gets on skin, cool rapidly with cold water.
Do not attempt to peel polymer from skin. Obtain medical treatment for thermal burn.
- ③ Eye Contact : In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.
Call a physician.
- ④ Inhalation : No specific intervention is indicated as compound is not likely to be hazardous by inhalation.
Consult physician if necessary.



Material Safety Data Sheet

5. Fire / Fighting Measures.

- ① Flaming Degree : Up to 300°C
- ② Fire Fighting Procedures : Use water spray to cool fire. Exposed surfaces and protect personal, Shut off "Fuel" to fire.
- ③ Special Fire Precautions And Hazardous Combustion Products : No unusual.

6. Accidental Release Measures.

- ① Personal precautions : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.
- ② Environmental precautions : Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.
- ④ Methods for cleaning up : Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal

7. Handling And Storage.

- ① Safe Stuffing : Avoid the phosphid material.
- ③ Inhalation : Using Flame Retardant

8. Exposure Controls / Personal Protection.

- ① Respiratory protection : No personal respiratory protective equipment normally required.
- ② Eye/Face protection : Safety glasses with side-shields.
- ③ Removing Method : Stuff In a suitable case or container.
- ④ Engineering Control Measures : None.
- ⑤ Protecting Breathing Respiratory Organ : Using a dust protecting mask.
- ⑥ Hand protecting : Protective gloves.
- ⑦ Skin/Body Protecting : Long sleeved clothing.
- ⑧ Personal Protecting For Open System Where Contact Is Likely, Wear Long Sleeves.

9. Physical And Chemical Properties.

- ① Physical State : Pallet.
- ② Smelt : None.
- ③ PH : Neutral.
- ④ Softening Point : 180 °C.
- ⑤ Molecular Weight : Mixture.

Material Safety Data Sheet

10. Stability And Reactivity.

- ① Chemical Stability : Chemically very stable
- ② Materials And Conditions To Avoid : Moisture and flammable material.
- ③ Hazardous Decomposition Products : HCl, CO, CO₂.
- ④ Hazardous Reactivity : None.

11. Toxicological Information.

- ① This mixture has not evaluated as a whole for health effects.

12. Ecological Information.

- ① Persistence and degradability : Not ready biodegradable.
- ② Environmental Toxicity : Chemicals are not readily available as they are bound within the matrix of the polymer.
- ③ Bioaccumulation Potential : Chemicals are not readily available as they are bound within the matrix of the polymer.
- ④ Additional advice : No data available.

13. Disposal Considerations.

- ① Product : Like most thermoplastics the product can be recycled. Where possible, recycling is preferred to disposal or incineration.
The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.
- ② Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, provincial and local regulations.

14. Transport Information.

- ① Not regulated for transportation

15. Regulatory Information.

- ① Australia AICS : Listed.
- ② China IECS : Listed.
- ③ Europe ENINECS : Not determined.
- ④ Japan ENCS : Not determined.
- ⑤ Korea KECI : Listed.

Material Safety Data Sheet

16.Other Information.

① This MSDS relates only to specific material designed and not valid for such material used in combination with any other materials or in any process. such information is to the best of TSC CO.,LTD. 's knowledge and believed accurate and reliable. However this made is no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.