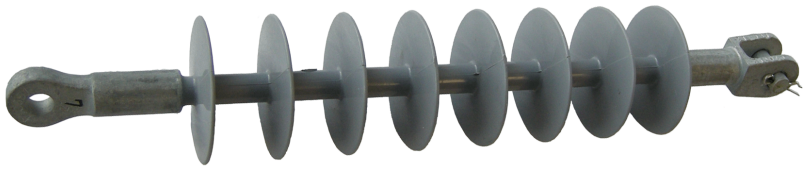
INSULATOR, SUSPENSION, POYLMER, FOR 26.4 KV SYSTEMS



1. Scope

This standard applies to overhead distribution polymer, suspension insulators.

This standard applies to the following Seattle City Light Stock Numbers:

Stock No	Nominal Section Length, in
690233	20
690235	25

2. Application

Suspension insulators are intended for use in overhead distribution systems nominally rated up to 26.4 kV phase-to-phase, 60Hz.

Insulators with a nominal section length of 20 inches are used to deadend overhead distribution conductors.

Insulators with a nominal section length of 25 inches are used in situations where additional section length is required, such as preserving climbing space.

3. Industry Standards

Insulator shall meet the applicable requirements of the following industry standards:

ANSI C29.1-1988 (R2000) Test Methods for Electrical Power Insulators

ANSI C29.13-2000 For Insulators- Composite-Distribution Deadend Type

ASTM A153-2005 Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware

4. Specifications

4.1 General

Unless indicated otherwise, all values cited below should be consistent with industry standards – they are repeated here for the convenience of the reader. Values or requirements different from industry standards are identified with the symbol ▲.

standards coordinator	*standards supervisor*	*unit director*
Aida Diop	John Shipek	Darnell Cola

4. Specifications, continued

4.1 General, continued

Insulator shall meet the following requirements:

	Stock Number		
	690233	690235	Reference
Section length, in	20 ±2 ▲	25 +1/-0 ▲	SCL preference
Class	DS-35	none	ANSI 29.13, Table 2
Strike/dry arc distance, minimum, in	13.5 ▲	20 ▲	SCL preference
Leakage distance, minimum, in	28.7	28.7	ANSI 29.13, Table 2
60 Hz dry flashover minimum, kV rms	145	145	ANSI 29.13, Table 2
60 Hz wet flashover minimum, kV rms	130	130	ANSI 29.13, Table 2
Positive critical impulse flashover, minimum, kV peak-to-peak	250	250	ANSI 29.13, Table 2
Specified Mechanical Load, minimum, lb	15,000 ▲	15,000 ▲	SCL preference
Routine Test Load, minimum, lb	7,500 ▲	7,500 ▲	SCL preference
Torsional Load, minimum, ft / lb	35	35	ANSI 29.13, Table 2

▲ values and requirements differ from industry standards

4.2 End Fittings

	Stock Number		
	690233	690235	Reference
Material	ductile iron, aluminum or forged steel	ductile iron, aluminum or forged steel	SCL preference
End fitting type (top/structure) end	clevis, ANSI 52-2 class	clevis, ANSI 52-2 class	ANSI 29.13, Figure 1
End fitting type (bottom/line) end	tongue, ANSI 52-2 class	tongue, ANSI 52-2 class	ANSI 29.13, Figure 1

Clevis pin shall be nominal 5/8-inch diameter.

Cotter pin shall be stainless steel and humped; self-retaining and self-locking after each installation.

4.3 Weathershed/Sheath Material

Weathershed/sheath material shall be made out of silicon rubber – to qualify as silicon type, weathershed/sheath material must be composed of at least 33% silicon by weight; “EP silicon alloys” do not qualify.

Parting lines along the weathershed/sheath must be kept to a minimum so as to reduce the likelihood of tracking when contaminated.

Weathershed/sheath material shall be gray.

5. Notice of Change

Manufacturer shall provide Seattle City Light reasonable notice of anticipated design changes. This includes, but is not limited to, changes in polymer formulation, dimensions, electrical characteristics, mechanical characteristics, or accessories.

6. Testing

Insulator test data that establishes compliance with the requirements of ANSI C29.13, Section 7 shall be provided upon request.

7. Marking

Suspension insulators shall be clearly and indelibly marked in accordance with ANSI C29.13-2000, Section 6. Marking shall include but not limited to:

- Manufacturer's name or symbol
- Year of manufacture
- Product Identification Number

8. Packaging

Suspension insulators shall be packaged in a way that prevents damage during shipping, handling, and long-term outside storage.

Crates shall be secured to pallets for handling by forklifts. Pallets shall not exceed 4 feet in height or 1,000 pounds in weight.

Individual packages shall be legibly marked with:

- Manufacturer's name
- Manufacturer's catalog number
- Seattle City Light's Stock Number

Shipping containers shall be legibly marked with:

- Seattle City Light's Purchase Order Number
- Seattle City Light's Stock Number

8. Issuance

Stock Unit: EA

9. Approved Manufacturers

Stock Number	Nominal Section Length, in	Manufacturers and Catalog Numbers				
		ARP Advanced Rubber Products	Hubbell Power Systems (Ohio Brass)	K-Line	MacLean Power Systems (Reliable)	Salisbury by Honeywell
690233	20	ARP-35SKCE-S	4010250215	KL35SCTM	DS-35M	9503U-SI
690235	25	ARP-35SKCE-SHP	4010350215	-	-	-

10. References

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Parker, Sean; SCL Standards Student Intern, subject matter expert for 6902.30

Shipek, John; SCL Standards Engineer, subject matter expert for 6902.30 (john.shipek@seattle.gov)