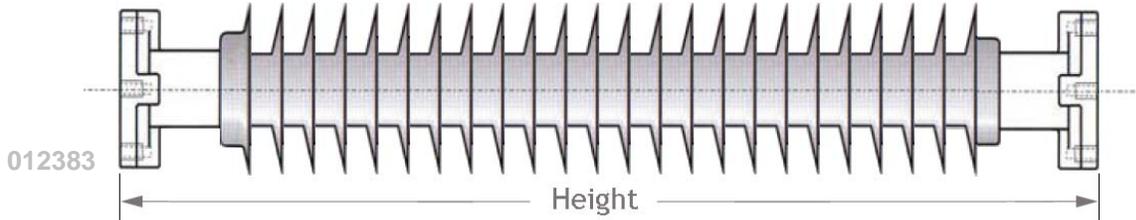


**INSULATOR, STATION POST, POLYMER
 FOR 115 kV NOMINAL SYSTEMS**



Note: Size and number of actual weathersheds will vary.

1. Scope

This Material Standard applies to polymer, station post insulators used to support 115 kV bus in substations. The end of each insulator has a 5-inch diameter bolt circle end fitting.

This insulator, in combination with a steel trunnion adapter, Stock No. 012381, can also be used as a 115 kV vertical line post insulator.

2. Industry Standards

Insulators shall meet the applicable requirements of the following national standards:

ANSI C29.1-1988 (R2002) Test Methods for Electrical Power Insulators

ANSI C29.9-1983 (R1996) Wet Process Porcelain Insulators – Apparatus, Post-Type

ASTM A153-1982 Zinc Coating (Hot Dip) on Iron and Steel Hardware

Insulator is intended to be as similar as practical to Technical Reference Number 286 unit as identified in Table 2 of ANSI C29.9-1983 (R1996) for porcelain post type insulators. No industry standard exists for polymer station post insulators.

3. Requirements

Overall height:	45" (plus/minus 1/16")
Impulse withstand:	550 kV crest minimum
Leakage:	99" minimum
Positive critical impulse flashover:	610 kV crest minimum
60 Hz wet withstand:	230 kV rms minimum
Ultimate mechanical strength in cantilever:	2,600 lbs. minimum
Ultimate mechanical strength in tension:	17,500 lbs. minimum
Ultimate mechanical strength in compression:	12,000 lbs. minimum
Ultimate mechanical strength in torsion:	30,000 in.-lbs. minimum

Ultimate mechanical strength ratings shall be based on fully assembled insulators; insulators with base and end fittings attached.

STANDARDS COORDINATOR	STANDARDS SUPERVISOR	UNIT DIRECTOR
<i>Gold Shield</i>	<i>John Schinner</i>	<i>Hardee Juy</i>

SEATTLE CITY LIGHT
MATERIAL STANDARD

STANDARD NUMBER: **6901.95**

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SUPERCEDING: NEW

EFFECTIVE DATE: October 11, 2004

3. Requirements, Continued

Base type (structure end):	5" bolt circle as defined by ANSI C29.9-1983 (R1996), Table 2, for technical reference number 286 type insulators.
End fitting type (line end):	5" bolt circle as defined by ANSI C29.9-1983 (R1996), Table 2, for technical reference number 286 type insulators.
Weathershed/sheath material:	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.
Weathershed/sheath material color:	Gray

4. Notice of Changes

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

5. Marking

Insulators shall be clearly and indelibly marked with the manufacturer's name or symbol, the year of manufacture, and load ratings. Load ratings shall be stated in units of pounds. Labeling shall be in English.

6. Packaging

Insulators shall be packaged in wood crates to protect against physical damage that could occur during shipping, handling, or long-term outside storage. If slatted crates are used, each insulator shall be sealed in plastic. If sealed crates are used, plastic is not required.

Insulator weathersheds shall not bear any load due to it's own weight or that of insulators or crates above or below it.

Crates shall be secured to pallets for handling by forklift. Pallets shall not exceed 4 feet in height or 1,000 pounds in weight. Crates shall be marked with the manufacturer's name or symbol, catalog number, Seattle City Light's Stock Number, and Purchase Order number.

Number of insulators per crate: 12 maximum.

Stock Unit: EA

Stock Number 012383

Approved Manufacturers	Type	Catalog Number
MacLean Power Systems	Armoursil	NAA100XH23S0
NGK-Locke	2-1/2" Core	S2-SG311-21
NGK-Locke	3-1/2" Core	S4-SH251-22