

Subject: Summary of test procedure for Polycase CG-30 through CG-35 cable glands

UL File No: E51579

CSA File No.: LR8919

Test Procedure:

Sequence “A” — Age-Oil-Flex Pull Tests

Six samples, three assembled to the minimum recommended wire size and three assembled to the maximum wire size, are assembled to the appropriate chassis. The samples are inspected to assure a good assembly has been achieved, then tested in sequence as described below.

Accelerated Aging Test:

The assemblies described above are placed in an air circulating oven maintained at a temperature of 70° C for a period of 168 hours. At the end of the 168 hours, the samples are allowed to cool to room temperature and examined for charring, warping and blistering or any damage that would impair the use of the bushing.

Oil Spray Test:

The samples are assembled to a liquid tight enclosure having the recommended chassis opening for the fitting to be tested. The samples are placed in the oil spray tank with the 3/8” spray nozzle placed 10 inches above the top of the fitting. The samples are sprayed with a 10-part water to 1-part oil mixture for 1/2 hour. The mixture shall be sprayed at a rate of not less than 2 gallons per minute and shall hit the cord of the assembly 1” above the top of the fitting. After 1/2 hour, the samples are removed from the oil spray tank and opened for inspection. Any penetration of fluid into the box is unacceptable.

Flex test:

The samples are assembled in a vertical orientation to the flex tester. A mark is placed on the cord 1/8” from the entrance side of the fitting. The cord is flexed through a 90 degree angle having a bend radius of 5” for cord 3/4” diameter or less, and a bend radius of 10” for larger cord. The cord is flexed for 180 degrees at the same bend radius in the opposite direction and then back to vertical. The flexing is repeated for 500 cycles. The cord must not displace more than 1/8” and the fitting shall not be damaged as to impair its use.

Pull Test:

The samples are marked 1/8” from the entry side of the bushing and mounted in a fixed vertical position. They are subjected to a 35 Lb pull for one minute at 90 degrees to the plane of the cord exiting the bushing. 90 degree fittings are pulled straight along the axis of the cord as it exits the bushing as well. The cord shall not slip more than 1/8”.

Sequence “B” -UV-Flex-Pull-Oil Tests:

Samples are assembled to the recommended wire and then to the appropriate chassis. The samples are inspected to assure a good assembly has been achieved, then tested in sequence as described below.

UV Test:

Samples are exposed to UV and water for 30 days. There can be no warping, cracking or damage that will impair the use of the product.

Flex test:

The samples are assembled in a vertical orientation to the flex tester. A mark is placed on the cord 1/8” from the entrance side of the fitting. The cord is flexed through a 90 degree angle having a bend radius of 5” for cord 3/4” diameter or less, and a bend radius of 10 for larger cords. The cord is flexed for 180 degrees at the same bend radius in the opposite direction and then back to vertical. The flexing is repeated for 500 cycles. The cord must not displace more than 1/8” and the fitting shall not be damaged as to impair its use.

Pull Test:

The samples are marked 1/8” from the entry side of the bushing and mounted in a fixed vertical position. They are subjected to a 35 Lb pull for 1 minute at 90 degrees to the plane of the cord exiting the bushing. 90 degree fittings are pulled straight along the axis of the cord as it exits the bushing as well. The cord shall not slip more than 1/8”.

Oil Spray Test:

The samples are assembled to a liquid tight enclosure having the recommended chassis opening for the fitting to be tested. The samples are placed in the oil spray tank with the 3/8” spray nozzle placed 10 inches above the top of the fitting. The samples are sprayed with a mixture of 10 parts water to 1-part oil for 1/2 hour. The mixture shall be sprayed at a rate of not less than 2 gallons per minute and shall hit the cord of the assembly 1” above the top of the fitting. After 1/2 hour, the samples are removed from the oil spray tank and opened for inspection. Any penetration of fluid into the box is unacceptable.



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Test for NEMA 6P Rating:

Samples are assembled to a suitable chassis and assembled into a submersion tank. The tank is filled with water and pressurized to 3 PSI for 24 hours. There shall be no leakage through the gland or locknut of the fittings.

Submersion Test: *

Immediately following the NEMA 6P Test, the pressure is increased to 70 PSI and held for 24 hours. There shall be no leakage through the locknut or gland.

*This is an in-house test and not part of the UL/CSA test program.

Report issued by CG-30 through CG-35 cable gland manufacturer