

South Carolina Department of Transportation
QUALIFIED PRODUCTS POLICY FOR
CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE

The purpose of this policy is to establish the minimum qualifications for the manufacture and acceptance of corrugated High Density Polyethylene (HDPE) pipe. Qualified producers will be listed on SCDOT Qualified Products Listing (QPL) 30.

To be considered for qualification, the producer must participate in the AASHTO National Transportation Product Evaluation Program (NTPEP) annual audit and testing program for each facility proposed to provide HDPE pipe for SCDOT projects. For more information on this program, visit the NTPEP website at www.ntpep.org.

1. Initial Qualification

For qualification of M252 pipe, the manufacturer must be listed by NTPEP as compliant for each size pipe requested for inclusion on the QPL. For initial qualification, the following shall be submitted:

- A copy of the NTPEP certificate of compliance
- A copy of the NTPEP audit report and comparison data from the most recent cycle
- A copy of any Corrective Action Reports associated with the most recent audit
- A letter requesting inclusion on QPL 30

For qualification of M294 pipe, the manufacturer must be listed as NTPEP compliant for each size pipe requested for inclusion on the QPL; additionally, they must have successfully completed the audit and testing for M294R pipe if they wish to be qualified to supply pipe containing recycled materials to SCDOT projects. For initial qualification, the following shall be submitted:

- A copy of the NTPEP certificate of compliance
- A copy of the NTPEP audit report and comparison data from the most recent cycle, to include test data of pipe containing recycled materials if applicable
- A copy of any Corrective Action Reports associated with the most recent audit
- Structural calculations in accordance with SCDOT Preconstruction Design Memorandum [PCDM-05](#) for acceptable fill heights
- Hydrostatic pressure test results for each pipe/joint combination for each size of pipe to be qualified
- A letter requesting inclusion on QPL 30, which must specifically state if M294R pipe is included in the request

2. Requirements

All HDPE pipe products must comply with the following:

- Supplemental Technical Specification 714 (SC-M-714)
- SCDOT Preconstruction Design Memorandum [PCDM-05](#) for the design cover height for the project and the pipe material chosen
- SCDOT Standard Drawings and Fill Height Tables
- Engineering Directive Memorandum 24 (EDM 24)

Hydrostatic Pressure Testing

The pipe manufacturer will furnish the Office of Materials and Research (OMR) a one-time certification for each size of AASHTO M294 pipe to be qualified indicating that the gasketed bell/spigot joint meets a 10 psi laboratory internal pressure test when tested according to ASTM D3212. The certification will consist of a joint performance test conducted at the manufacturer's facility or certified independent testing laboratory with direct oversight by the facility's certified Quality Control Technician as listed in the NTPEP compliant QCP. Tests are to be performed on each pipe/gasket combination that will be certified and identified on QPL 30. Each pipe/joint combination is considered manufacturer specific. Therefore, if an HDPE manufacturer uses gaskets from more than one gasket manufacturer, each pipe /joint combination must be tested separately. If an HDPE pipe manufacturer changes gasket manufacturers, then joint/ gasket testing must be performed and resubmitted.

The pipe manufacturer shall provide a letter of certification verifying that the gasket complies with the requirements of ASTM F477. Additionally, the manufacturer may submit certified test results indicating that the pipe/joint combination meets a 13 psi laboratory internal pressure test when tested in a straight alignment at 5% deflection.

The joint certification furnished to OMR must include:

- List of tested gasket materials, sizes, manufacturers, etc.
- Table or list of pipe sizes which utilize joint design
- Title block with plant identification information
- Hydrostatic test reports for 10 psi test and 13 psi test if manufacturer desires to submit for the higher pressure
- Letter of certification of joint compliance to ASTM F477 and certification of hydrostatic proof tests

3. Continued Qualification

Each production facility must maintain NTPEP compliance to remain on QPL 30. If a facility has their certificate of compliance removed by NTPEP, they will be removed from the QPL. Subsequent inclusion on the QPL will only be considered after all initial qualification requirements have been met and the SCDOT is satisfied that any previous issues have been resolved.

The SCDOT reserves that right to:

- Visit and audit any facility, as well as request additional sampling and testing
- Disqualify any pipe delivered to an SCDOT project site that appears to have not met all requirements or which appears to be damaged or otherwise unsatisfactory
- Suspend a facility's qualification if documentation, quality control, end product, or business practices are deemed unsatisfactory; at which time the Materials and Research Engineer may conduct an investigation before determining the final disposition of the facility

It is the Producer's responsibility to resubmit calculations and/or pressure test results to the SCDOT contact listed in this Policy anytime changes are made at a facility that may affect qualification status of the facility or the pipe.

Submit information to: G. Michael Lockman, PE
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