



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

Section No:	MS L-8
Page No.:	1 of 6
Issue Date:	03/01/16
Superseded Date:	01/23/15

CORROSION CONTROL MATERIALS

Coke Breeze

1. SCOPE

This specification covers petroleum coke breeze used in surface and deep ground beds.

2. APPLICABLE DOCUMENTS

- 2.1 ASTM International (ASTM) D-271-70, "Laboratory Sampling and Analysis of Coal and Coke."
- 2.2 Great Lakes Coke Test procedure No. C-12A.
- 2.3 United States Department of Transportation (DOT), Code of Federal Regulations (CFR), Title 49, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

NOTE: Unless otherwise specified, the editions of the above documents incorporated by DOT 49, CFR 192 are applicable. Documents not incorporated by DOT 49, CFR 192 will be the most recent edition.

3. TERMINOLOGY

3.1 General

- 3.1.1 "Southwest Gas," "Southwest" or "SWG" wherever used in this specification and other similar terms wherever used in this specification and other related documents will refer exclusively to Southwest Gas Corporation.
- 3.1.2 The terms "approved", "as approved", "satisfactory", "as directed", "or equal" or other similar terms wherever used in this specification and other related documents will mean "as determined by Southwest Gas", unless specifically stated otherwise.
- 3.1.3 "Product Information Package" or "PIP" wherever used in this specification and other related documents will mean the required technical product information that a manufacturer must submit to SWG to determine if the product is suitable for use by SWG, unless specifically stated otherwise.



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4. MATERIALS AND MANUFACTURING

- 4.1 Coke shall be manufactured from petroleum and shall be calcined at 1250°C to remove all volatiles.
- 4.2 Coke shall be packaged in three sizes, fine and two sizes of course. Fine coke shall have 100 percent of the material passing through a 16 mesh screen. The 68 lbs. /ft³ course coke shall have 90 percent of the material between 0.0393 inches and 0.1968 inches diameter. The 54 lbs. /ft³ course coke shall particle sizing ranging from 0.0393 inches to 0.472 inches.
- 4.3 The coke will be analyzed as outlined in ASTM D-271 and will conform to the following:

PROPERTY	UNITS
Fixed Carbon	99% Minimum
Ash	0.6% Maximum
Moisture	0.05% Maximum
Volatiles	0% @ 950°C
Bulk Density	
• Fine	74 Lbs/Ft ³
• Course I	68 Lbx/Ft ³
• Course II	54 Lbs/Ft ³

- 4.4 The fine coke shall have a surfactant added to facilitate in pumping and settling.
- 4.5 De-dusting oils shall not be used during manufacture and packaging.



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5. PERFORMANCE REQUIREMENTS

The resistivity of the coke shall be .1 Ohm-centimeters or less at 150 PSI when tested using industry standard C-12A.

6. INSPECTION

- 6.1 Successful review of the Product Information Package (PIP), as well as any future reference by SWG to the Seller's part number or internal code number in any future contract or purchase, will mean only that no conflict with the specification was found, and will not relieve the Seller from meeting all the requirements of this specification.
- 6.2 SWG retains the option to inspect the manufacture and testing of any and all materials, products or systems supplied to this specification at the manufacturers.
- 6.3 SWG will make appropriate inspections and tests of any and all materials, products or systems supplied to this specification. SWG will have the right, at their option, to reject any material which fails to conform to this specification. Any such rejection may take place at the manufacturer's facility; the supplier's warehouse or any subsequent delivery location, before or after SWG assumes possession. Notice of the rejection will be made promptly to the supplier. The defective product will be replaced or returned for credit at the manufacturer's expense.
- 6.4 Any changes in the manufacturing of previously-approved coke covered under this document for sale to SWG must be approved by SWG's Engineering Staff. **Failure to obtain SWG's approval may be cause for rejection and disqualification as an approved supplier.**

7. CERTIFICATION

The manufacturer or supplier's certification shall be furnished to Southwest. This certification shall state that samples representing each lot have been manufactured, tested and inspected in accordance with this specification and that requirements have been met. When requested or specified in the purchase order or contract, a report of test results will be provided.

Upon the request of Southwest, the certification of an independent third party indicating conformance to the specification may be considered at Southwest's expense.



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8. SAFETY DATA SHEETS

In accordance with law, the Seller will supply Safety Data Sheets for all applicable items supplied under this specification to the following:

- 1) The Receiving location
- 2) Engineering Staff
- 3) Southwest Gas Corporation
Corporate Safety
Mail Station LVA-581
P.O. Box 98510
Las Vegas, NV 89193-8510

9. PRODUCT MARKING

Products shall be marked with the manufacturer's name or trademark and the type of coke breeze.

10. PACKAGING AND PACKAGE MARKING

- 10.1 All products covered in this specification will be packaged to prevent damage during shipping.
- 10.2 Course coke will be packed in a valve pack multi-wall paper bag with a polyethylene liner.
- 10.3 Fine coke will be packed in bags consisting of a polyethylene inner liner and a woven polypropylene outer liner.
- 10.4 All coke will be sacked in 50 pound bags with 40 bags per pallet.
 - When standard pallets are used, a sheet of cardboard or plywood will be laid on top of the pallet prior to stacking bags to prevent bags from settling between the slats on the pallet.
 - If the pallet has a solid surface, cardboard or plywood is not required.



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11. STOCK CLASSIFICATION DESCRIPTON

COKE BREEZE, FINE, CALCINED PETROLEUM, 100 PERCENT TO PASS THROUGH 16 MESH SCREEN, 50 POUND SACK.

COKE BREEZE, COURSE, CALCINED PETROLEUM, TO PASS THROUGH .375-INCH SCREEN AND BE RETAINED ON 16 MESH SCREEN, 68 LB/CUBIC FOOT, 50 POUND SACK.

COKE BREEZE, COURSE, CALCINED PETROLEUM, PARTICLE SIZE RANGING FROM 0.0393 INCHES TO 0.472 INCHES, 54 LB/CUBIC FOOT, 50 POUND SACK.