

**SPECIFICATION
FOR
OIL, FUEL, HEATING**

(This specification is released for procurement purposes until revised or rescinded.)

SCOPE

This specification covers all grades of heating fuel oil intended for use in various types of fuel-oil burning equipment. It is intended to cover requirements for all heating fuel oils purchased by state agencies, institutions and the public schools.

I. CLASSIFICATION

Heating fuel oil covered by this specification shall be of the following grades, as specified in the Invitation for Bids:

No. 1- A light distillate intended for use in burners of the vaporizing pot-type in which the oil is converted to a gas by contact with a heated surface. High volatility is necessary to ensure that evaporation proceeds with a minimum of residue.

No. 2 - A heavier distillate than grade No. 1. It is intended for use in atomizing type burners which spray the oil into a combustion chamber where the tiny droplets burn while in suspension. This grade of oil is used in most domestic burners and in many medium capacity commercial-industrial burners where its ease of handling and ready availability sometimes justify its higher cost over the residual fuels.

No. 4- Usually a light residual, but it sometimes is a heavy distillate. It is intended for use in burners equipped with devices that atomize oils of higher viscosity than domestic burners can handle. It is well suited for horizontal rotary cup burners that are not equipped with preheaters and in burners of the spray-nozzle type having preheaters to lower the viscosity and atomized at relatively low storage temperatures. Thus, in all but extremely cold weather it requires no preheating for handling.

No. 5 (Light) - A residual fuel of intermediate viscosity for burners capable of handling fuel more viscous than Grade No. 4 without preheating. Preheating may be necessary in some types of equipment for burning and in colder climates for handling.

No. 5 (Heavy) - A more viscous residual fuel intended for use in burners equipped with preheaters to reduce the viscosity. In cold climates preheating usually is needed to permit pumping from storage tank to the burner.

No. 6- Sometimes referred to as "Bunker C," is a high viscosity oil used mostly in commercial and industrial heating. It requires preheating in the storage tank to permit pumping, and additional preheating at the burner to permit atomizing. The extra equipment and maintenance required to handle this fuel usually precludes its use in small installations.

II. APPLICABLE STANDARDS

The following document, of the issue in effect on the date of the Invitation for Bids, shall form a part of this specification to the extent described in REQUIREMENTS:

ASTM-D396 - Fuel Oils

ASTM documents may be obtained from:

ASTM International

100 Barr Harbor Drive

PO Box C700

West Conshohocken, PA 19428-2959

or online at <http://www.astm.org/>

III. REQUIREMENTS

A. GENERAL

The grades of heating fuel oil specified herein shall be homogeneous hydrocarbon oils, new or reclaimed, free from grit, inorganic acid, and from excessive amounts of solid or fibrous foreign matter.

B. PHYSICAL AND CHEMICAL PROPERTIES

Grades 1, 2, 4 and 5 heating fuel oil shall comply with ASTM-D396. Grade 6 fuel oil shall comply with ASTM-D396, but with the following limits: Ash - Maximum 0.3%, BSW - Maximum 0.75% and sulphur not to exceed limits as specified in the Invitation for Bids. Grade 6 fuel oil may be adjusted for viscosity, if required, by the addition of grades 2, 4 or 5. But, in no case shall "Crankcase" or "used" oil be the diluent.

C. QUESTIONNAIRE

If called for in the Invitation for Bids, a fully executed questionnaire shall be furnished.

IV. WARRANTY

The contractor agrees to replace promptly any delivery lot found not conforming to this specification. Such replacement shall be free of any charge to the purchaser.

V. SERVICE, PARTS, AND MANUALS

This section does not apply.

VI. ACCEPTANCE EVALUATION & QUALITY ASSURANCE

The right is reserved by the purchaser to take a composite sample of not less than one (1) gallon of heating fuel oil from each lot delivered and to make such analyses and tests as may be desired to insure compliance with this specification. All such tests shall be made in accordance with ASTM-D396.

For the purpose of sampling, a lot shall consist of all heating fuel oil of the same grade delivered in a single shipment.

If the test sample of the heating fuel oil is found not to conform to the requirements of this specification, the lot which it represents shall be rejected.

VII. DELIVERY AND PAYMENT

Delivery of and payment for heating fuel oil under this specification shall be in accordance with the terms and conditions of the Invitation for Bids. The contractor shall be responsible for the proper and safe transportation to the destination.

VIII. ORDERING DATA

Purchasers should exercise any desired options offered herein and should specify the following in the Requisition and the Invitation for Bids:

1. Title, number, and date of this specification.
2. The grade or grades of heating fuel oil desired.
3. If bidder is to furnish a completed questionnaire.