

A-A-59577  
June 25, 2004

## COMMERCIAL ITEM DESCRIPTION

### TESTER, FLASH POINT ASTM D93 METHOD A and B

The General Services Administration has authorized the use of this commercial item description, for all federal agencies.

1. **SCOPE.** This Commercial Item Description (CID), describes Tester, Flash Point Closed Cup, ASTM D93 Method A and B. The flash point tester is used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions.

#### 2.0 CLASSIFICATION

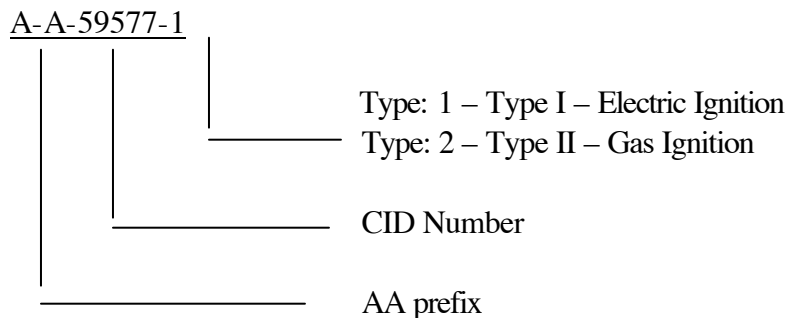
2.1 Classification. Flash Point Testers will be the following types.

2.1.1 Types. The types of flash point testers are as follows:

Type I – Electric Ignition

Type II – Gas Ignition

2.2 Part or Identification Number (PIN). The following PIN procedures are for government purposes and do not constitute a requirement for the contractor.



Comments, suggestions or questions on this document should be addressed to WR-ALC-LEEE, 295 Byron Street, Robins AFB GA 31098-1611. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).

### 3.0 SALIENT CHARACTERISTICS

- 3.1 Equipment. The complete countertop instrument shall be capable of automatically determining the flash point of volatile materials in accordance with ASTM D93 Method A and B. The instrument is designed to increase the laboratory's productivity, repeatability and reproducibility. Test results include adjustments to compensate for barometric pressure differences. The characteristics described in this section are the minimum requirements necessary for this tester.
- 3.2 Standard Test Method. The flash point tester shall automatically perform in accordance with ASTM D93 Method A and B.
- 3.2.1 Method/Procedure A. Method A is applicable to distillate fuels (diesel, kerosene, heating oil, and turbine fuels), new lubricating oils, and other homogeneous petroleum liquids not included in the scope of Procedure B.
- 3.2.2 Method/Procedure B. Method B is applicable to residual fuel oils, cutback residuals, used lubricating oils, mixtures of petroleum liquids with solids, petroleum liquids that tend to form a surface film under test conditions or are petroleum liquids of such kinematic viscosity that they are not uniformly heated under the stirring and heating conditions of Procedure A.
- 3.3 Sample Flash Point Temperature Measurement Range. The sample temperature flash point measurement range of the petroleum products shall be from  $+1^{\circ}\text{C}$  to  $+370^{\circ}\text{C}$  ( $+38^{\circ}\text{F}$  to  $+700^{\circ}\text{F}$ ).
- 3.4 Apparatus. The apparatus of the closed cup flash point tester shall conform to the specifications outlined in ASTM D93. The apparatus shall consist of a minimum a test cup, test cover and shutter, stirring device, heating source, and ignition source device.
- 3.4.1 Test Cup. The test cup shall be manufactured of brass or other non-rusting metal of equivalent heat conductivity and shall conform to the dimensions specified in ASTM D93.
- 3.4.2 Test Cover and Shutter. The test cover and shutter shall be manufactured using the same material as the test cup and shall conform to the specifications as outlined in ASTM D93. The shutter shall conform to the specifications as outlined in ASTM D93. The cup cover shall be detachable for easy cleaning.
- 3.4.3 Stirring Device. The stirring device shall conform to the specifications as outlined in ASTM D93. The tester shall be capable of both automatically determining (preprogrammed) and user defining the stirring rate of the sample under test.

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- 3.4.4 Heating Source. The heating source shall conform to the specifications as outlined in ASTM D93. The tester shall be capable of both automatically (preprogrammed) and user defining the heating rate of the sample under test.
- 3.4.5 Ignition Source Device. The tester shall be capable of having both gas and electric ignition. The Ignition source device shall conform to the specifications outlined in ASTM D93.
- 3.4.6 Other Related ASTM requirements. ASTM D93 also applies to the requirements of this tester.
- 3.5 Barometric Pressure Detector. The closed cup flash point tester shall be supplied with a built-in barometer that automatically corrects results to standard pressure.
- 3.6 Thermal and Ionization Flash Detection. The tester shall have thermal and ionization flash detection capabilities.
- 3.7 Forced Air Cooling. The tester shall have built-in forced air cooling.
- 3.8 Calibration. The tester shall be capable of automatically calibrating the tester.
- 3.9 Safety Features. The tester shall have these safety features which includes (but not limited to): automatic suppression of the gas source at the end of the test and detection of extinction of the gas flame during the test if gas ignition is used, over-heating detection with auto shut-off of heater, automatic fire detection system with external fire alarm connection.
- 3.10 Display. The tester shall be supplied with a LCD monochrome display or equivalent. The display shall be visible from a distance of 5 meters.
- 3.11 Keyboard. The tester shall be designed with an alphanumeric keyboard which will allow the users to input data to the tester.
- 3.12 Test Procedures. The closed cup flash point tester shall have the capabilities of automatic preprogrammed and user defined (minimum 15) methods.
- 3.13 Data Storage. The tester shall be capable of storing a minimum of 300 test results, transfer data to a LIMS or other data storage device via a RS 232C cable, and print a copy of the test results when a printer is attached.
- 3.14 Tester Size. The size of the tester shall be approximately 22.83 in. (58 cm) L x 15.75 in. (40 cm) W x 23.62 in. (60 cm) H.
- 3.15 Tester Weight. The weight of the tester shall be approximately 55.12 lb. (24 kg).

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- 3.16 Power Requirements. The power requirements for testers that are used in laboratories within the United States shall be specified by the end user. If the solicitation indicates destination(s) outside the United States, then the offered item(s) may have to be altered to adapt to the proper power requirements and electric plugs for the destinations indicated. The proposed suppliers shall have the resources available to provide the proper power requirements for the destination indicated.
- 4.0 REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).
- 5.0 PRODUCT CONFORMANCE PROVISIONS
- 5.1 Product Conformance: The products provided shall conform to the producer's own drawings, specifications, standards, and quality assurance practices and be the same product offered for sale in the commercial market. The government reserves the right to require proof of such conformance. Minor changes to the commercial product, with respect to ruggedizing and environmental suitability and protection shall be permitted, subject to the approval of the procurement office, to satisfy the requirements of this requirement.
- 5.2 Installation and Demonstration: If required by the end user, the contractor shall be responsible for user installation and orientation of the equipment at the designated Air Force facility laboratory and assure that the equipment is ready for use. Installation and demonstration is projected to take one day. The cost for user orientation shall be at no additional cost to the government.
- 5.3 Market Acceptability: The following market acceptability criteria are necessary to document the quality of the product to be provided under this requirement.
- 5.4 The manufacturer of the item shall have been producing a product meeting these requirements for at least 5 years.
- 5.4.1 The manufacturer of the item shall have sold at least 100 units meeting these requirements to the government and/or the commercial market during the last 2 years.
- 5.4.2 Alternative offers: A current, complete instrument with all items required for use, shall be offered/provided. If an alternative/replacement item is offered, descriptive literature (commercial catalogs, specification sheets, etc.) shall be submitted with the quote, for review and evaluation by the cognizant engineer who will coordinate qualifying the instrument with the end user. If the instrument has not been purchased previously by the government and meets the evaluation process, the instrument shall be subjected to functional testing prior to final approval by the government.

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## 5.5 Serviceability, Reliability, and Quality of Materials:

- 5.5.1 One copy of the commercial operation and maintenance manual(s) shall be shipped with the equipment. One additional copy of the operation and maintenance manual shall be shipped to the cognizant engineer at no additional cost to the government. The address for the cognizant engineer is found in 5.5.2.
- 5.5.2 All supplied items shall carry a standard commercial warranty on parts and labor. Information on warranty duration and expiration date, conditions and point of contact shall be shipped with each unit. One additional copy of the warranty information shall be shipped to the cognizant engineer at no additional cost to the government. The address for the cognizant engineer is; FSC 6630 Engineer, WR-ALC/LEEE, 295 Byron Street, Robins AFB, GA 31098-1611.

6.0 PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

## 7.0 NOTES

### 7.1 Source of Documents

- 7.1.1 The Code of Federal Regulations (CFR) may be obtained from the Superintendent of Documents, U.S. Printing Office, Washington DC 20402.
- 7.1.2 ASTM D93, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, can be obtained from ASTM 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-5959.

### 7.2 Suggested Sources of Supply

Type I	NSN
Petroleum Analyzer Company L.P.	6630-01-449-8006
3234 East Pasadena Freeway	
Pasadena, TX 77503	

Type II	NSN
ISL, North America	6630-01-412-1795
1711 Townhurst Drive	
Houston, TX 77280-1268	

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Petroleum Analyzer Company L.P.  
3234 East Pasadena Freeway  
Pasadena, TX 77503

Note: Petroleum Analyzer Company is authorized to sell products manufactured by ISL.

MILITARY INTEREST:

Custodian:  
Air Force – 99

Preparing Activity:  
Air Force – 84

Agent:  
Air Force - 99

(Project No. 6630-0801)

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