



Republic of the Philippines  
**DEPARTMENT OF ENERGY**

In line with the objectives of the Clean Air Act of 1999, the Department of Energy's Technical Committee on Petroleum Products and Additives (DOE/TCPPA) reviewed and revised the standard specification for *Kerosene* (DPNS/DOE QS 009:2019).

The proposed standard is an update/review of PNS/DOE QS 009:2007 with minor revision made particularly on the property of color, limiting the scope of kerosene to energy related applications as well as updating of test methods.

Further, this update is made in keeping with the DOE's thrust of reviewing the quality specifications of petroleum products in terms of the current requirement of the industry, its users and manufacturers vis-à-vis the continuing commitment in ensuring supply availability and also by endeavoring to harmonize internationally/regional environmental standards for fuels.

Enclosed is a copy of the draft standards for your comments. It is suggested that any proposed changes to the specifications be supported with explanations/ justifications.

We appreciate receiving your comments/positions thru mail or email at [tcppasecretariat@gmail.com](mailto:tcppasecretariat@gmail.com) on or before August 20, 2019 for it to be considered in the finalization of the standard. Non- receipt of your comments on the specified date shall be construed as an approval of the draft standards.

Thank you for your usual cooperation.

Very truly yours,

  
↓ Dir, RINO E. ABAD 4/27  
OIC-OIMB

  
BGA/RSI/ADTL/RIR

**DPNS/DOE QS 009:2019**  
**ICS xxxxxxxx**

**Petroleum products – Kerosene - Specification**

**Foreword**

This Philippine National Standard PNS/DOE QS 009:2019 Petroleum products – Kerosene - Specification was prepared by the Department of Energy through the Technical Committee on Petroleum Products and Additives (DOE/TCPPA) and was approved for adoption as Philippine National Standard by the Bureau of Philippine Standards

This standard cancels and replaces PNS/DOE QS 009:2007 with ~~minor~~ revision made particularly on the property of color, limiting the scope of kerosene to energy related applications as well as updating of test methods.

The DOE/TCPPA undertook this review in keeping with the objectives of the Clean Air Act of the Philippines as well as with the DOE's policy and program of updating the fuel quality specifications of petroleum products in terms of the current requirement of the industry, its users and manufacturers vis-à-vis the continuing commitment in ensuring supply availability and also by endeavoring to harmonize internationally/regional environmental standards for fuels.

## 1 Scope

This standard specifies the requirements for kerosene intended for (1) illuminant, (2) fuel for burner application except aviation fuel and sold at retail outlets.

## 2 References

The titles of the standard publications referred to in this standard are listed on the inside back cover.

## 3 Definition

For the purpose of this standard **kerosene** is defined as a refined petroleum distillate suitable for use as fuel in cooking ranges, stoves, lamps, refrigerators, furnaces and other similar appliances and devices.

## 4 Requirements

Kerosene shall conform to the chemical and physical requirements specified in Table 1.

Table 1 – Chemical and physical requirements for kerosene

PROPERTY	Limit	Test Method
Appearance	Clear	Visual
Burning quality	Pass	PNS ASTM D187 or IP 10
Color, Saybolt, min.	+16	PNS ASTM D 156 or PNS ASTM D 6045
Distillation:		PNS ASTM D 86 or PNS ISO 3405
Temperature, °C, max.		
10% volume recovered	205	
End point	300	
Flash point, TCT, °C, min.	38	PNS ASTM D 56
Smoke point, mm, min.	20	PNS ASTM D 1322 or PNS ISO 3014
Sulfur, % by mass, max.	0.30	PNS ASTM D1266 or PNS ASTM D 1552 PNS ASTM D2622 or PNS ASTM D4294 or PNS ASTM D 7039 or PNS ISO 8754 or PNS ISO 14596

**6 Sampling**

Kerosene shall be sampled in accordance with PNS ASTM D 4057 or PNS ISO 3170.

**7 Test methods**

Kerosene shall be shall be tested in accordance with the methods specified in Table 1.

**References:**

The following referenced documents are indispensable for the application of this document.

PNS ASTM D56-16a (ASTM published \_\_\_\_), Standard Test Method for Flash Point by Tag Closed Cup Tester

PNS ASTM D86-18 (ASTM published \_\_\_\_), Standard Test Method for Distillation of Petroleum Products and Liquid Fuels at Atmospheric Pressure

PNS ASTM D156-15 (ASTM published \_\_\_\_), Standard Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)

PNS ASTM D187-18 (ASTM published \_\_\_\_), Standard Test Method for Burning Quality of Kerosene

PNS ASTM D1266-18 (ASTM published \_\_\_\_), Standard Test Method for Sulfur in Petroleum Products (Lamp Method)

PNS ASTM D1322-18 (ASTM published \_\_\_\_), Standard Test Method for Smoke Point of Kerosene and Aviation Turbine Fuel

PNS ASTM D1552-16e1 (ASTM published \_\_\_\_), Standard Test Method for Sulfur in Petroleum Products by High Temperature Combustion and Infrared (IR) Detection or Thermal Conductivity Detection (TCD)

PNS ASTM D2622-16 (ASTM published \_\_\_\_), Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry

PNS ASTM D4057-12(2018) (ASTM published \_\_\_\_), Standard Practice for Manual Sampling of Petroleum and Petroleum Products

PNS ASTM D4294-16e1 (ASTM published), Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-ray Fluorescence Spectrometry

PNS ASTM D6045-12 (2017) (ASTM published \_\_\_\_), Standard Test Method for Color of Petroleum Products by Automatic Tristimulus Method

PNS ASTM D7039-15a (ASTM published \_\_\_\_), Standard Test Method for Sulfur in Gasoline, Diesel Fuel, Jet Fuel, Kerosene, Biodiesel, Biodiesel Blends, and Gasoline-Ethanol Blends by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry

PNS ISO 3014:1993 - Petroleum products -- Determination of smoke point of kerosine

PNS ISO 3170:2004 - Petroleum liquids -- Manual Sampling

PNS ISO 3405:2019 -- Petroleum products -- Determination of distillation characteristics at atmospheric pressure

PNS ISO 8754:2003 - Petroleum products -- Determination of sulfur content -- Energy-dispersive X-ray fluorescence spectrometry

PNS ISO 14596:2007 - Petroleum products -- Determination of sulfur content -- Wavelength-dispersive X-ray fluorescence spectrometry

IP 10/\_\_, Determination of Kerosene Burning Characteristics -- 24 Hour Method

### **Abbreviations**

PNS - Philippine National Standard

ASTM - American Society for Testing and Materials

IP - Institute of Petroleum IP Test Method

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