

# UGANDA STANDARD

First Edition  
2008-09-08

---

---

## Kerosene for domestic heating and illuminating (BIK)

---

---



Reference number  
US 803: 2008

© UNBS 2008

**Compliance with this standard does not, of itself confer immunity from legal obligations**

**A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application**

© UNBS 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from UNBS.

Requests for permission to reproduce this document should be addressed to

The Executive Director  
Uganda National Bureau of Standards  
P.O. Box 6329  
Kampala  
Uganda  
Tel: 256 414 505 995  
Fax: 256 414 286 123  
E-mail: [unbs@infocom.co.ug](mailto:unbs@infocom.co.ug)  
Web: [www.unbs.go.ug](http://www.unbs.go.ug)

## Contents

Page

Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Definitions and abbreviations .....	1
4 Symbols (and abbreviated terms) .....	2
5 Requirements .....	2
5.1 General .....	2
5.2 Smoke point .....	2
5.3 Burning quality .....	2
5.4 Storage stability .....	3
6 Inspection and methods of test .....	3
6.1 Inspection .....	3
6.2 Methods of test .....	3
7 Packing and labelling .....	3
7.1 Packing .....	3
7.2 Labelling .....	4
Annex A (normative) Note to purchasers .....	5
Annex B (normative) Sampling and compliance with this standard .....	6
B.1 Sampling .....	6
B.1.1 General .....	6
B.1.2 Definitions .....	6
B.1.3 Samples for inspection and testing .....	6
B.2 Compliance with this standard .....	6
Annex C (informative) Quality verification of kerosene for domestic use .....	7

## **Foreword**

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Tourism, Trade and Industry established under Cap 327, of the Laws of Uganda. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT/SPS Agreements of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

### **Committee membership**

The following organisations were represented on the Technical Committee for Chemicals and environment standards, UNBS/TC 5 in the development of this standard:

- Government Chemist
- Ministry of Energy and Mineral Resources
- Libra Energy Ltd
- Total (U) Ltd.
- Shell (U) Ltd
- Kobil (U) Ltd.
- Uganda National Bureau of Standards

# Kerosene for domestic heating and illuminating

## 1 Scope

This Uganda Standard specifies the requirements for a hydrocarbon fuel suitable for use in wick-fed, pressure vaporizing and other kerosene burning appliances for space heating, cooking and illumination.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ASTM D 56, *Standard test method for flash point by tag closed cup tester*

ASTM D 86, *Standard test method for distillation of petroleum products at atmospheric pressure*

ASTM D 93, *Petroleum products — Determination of flash — Abel closed cup method*

ASTM D 130, *Standard test method for corrosiveness to copper from petroleum products by copper strip test*

ASTM D 156, *Standard test method for Saybolt color of petroleum products (Saybolt chromometer method)*

ASTM D 187, *Standard test method for burning quality of kerosene*

ASTM D 1266, *Standard test method for sulfur in petroleum products (Lamp method)*

ASTM D 1322, *Standard test method for smoke point of kerosene and aviation turbine fuel*

ASTM D 4057, *Standard practice for manual sampling of petroleum and petroleum products*

ASTM D 4177, *Standard practice for automatic sampling of petroleum and petroleum products*

IP 17, *Determination of colour — Lovibond tintometer method*

US ISO 3405, *Petroleum products — Determination of distillation characteristics at atmospheric pressure*

ISO 4260, *Petroleum products and hydrocarbons — Determination of sulfur content — Wickbold combustion method*

US ISO 9001, *Quality management systems — Requirements*

## 3 Definitions and abbreviations

### **acceptable**

acceptable to the authority administering this standard, or to the parties concluding the purchase contract, as relevant

## 4 Symbols (and abbreviated terms)

- ASTM - American Society for Testing and Materials
- BIK - Bulk Illuminating Kerosene
- IP - Institute of Petroleum

## 5 Requirements

### 5.1 General

Kerosene shall be a homogeneous mixture consisting of highly refined hydrocarbon distillates. It shall be clear and free from water, suspended matter, sediment and other impurities and it shall possess a characteristic odour. It shall also comply with the requirements listed in Table 1.

### 5.2 Smoke point

The smoke point of the kerosene shall not be less than 25 mm.

### 5.3 Burning quality

When the kerosene is tested in accordance with the method described in ASTM D 187, using the IP burner, at a fuel consumption rate not exceeding 23 g/h, at the end of the 24 h test period,

- a) any difference between the width of the flame and its initial width shall not be more than 2 mm.
- b) any decrease in the height of the flame, as compared with its initial height, shall not be more than 3 mm.
- c) the chimney shall not show more than a slight bloom.
- d) there shall be no appreciable quantity of hard incrustation on the wick.
- e) the char value shall be less than 10 mg/kg of fuel burnt.

Table 1 — Requirements for kerosene

Property	Requirements	Test method
Flash point, °C, min.	38	ASTM D 56 or ASTM D 93
Distillation:		
a) Initial boiling point, °C, min.	170	ASTM D 86 or
b) Final boiling point, °C, max.	300	US ISO 3405
c) Residue, % (by volume), max.	2,0	
Sulfur content, % (by mass), max.	0,05	ASTM D 1266 or ISO 4260
Smoke point, mm, min.	+ 25	ASTM D 1322
Colour:		
a) IP glass standard, max.	1.5	IP 17
b) Saybolt, min.	+25	ASTM D 156
Copper corrosion (3 h at 50 °C), ASTM scale classification, max.	1B	ASTM D 130
Density at 20 °C	0.76 - 0.82	ASTM D 1298 or ISO 3675
10 % v/v recovery temperature, °C, max.	205	ASTM D 86 or US ISO 3405

#### 5.4 Storage stability

After storage in the original containers under normal storage conditions for a period of at least 12 months after the date of receipt, the kerosene in full, unopened containers shall comply with all requirements of this standard.

## 6 Inspection and methods of test

### 6.1 Inspection

Inspect the containers taken in accordance with B.1.3 for compliance with all the relevant requirements of this standard for which tests to assess compliance are not given in 5.2 to 5.4.

### 6.2 Methods of test

For all properties, use the applicable method or, when relevant, one of the applicable methods listed in Table 1 and those given in 5.3.

## 7 Packing and labelling

### 7.1 Packing

The condition of containers at the point of sale to consumers, drums, intermediate bulk containers and road tank vehicles shall be such as not to be detrimental to the quality of the kerosene during normal transport and storage.

## **7.2 Labelling**

For the labelling, placarding and preparation of shipping documents for fuel that complies with the requirements of this standard, the following shall apply:

- a) the hazard-class diamond, as for Class 3 dangerous goods;
- b) the proper shipping name: "KEROSENE FOR DOMESTIC HEATING AND ILLUMINATING";
- c) the Substance Identification Number (SIN), 1223; and
- d) other information including the supplier's brand name or trademark, the description, "KEROSENE FOR DOMESTIC USE" and the quantity.



**Annex A**  
(normative)

**Note to purchasers**

The following requirement shall be agreed upon between the supplier and the purchaser:

when the kerosene is to be stored for a period exceeding 12 months, any additional requirements for storage stability (see 4.4).

## **Annex B** (normative)

### **Sampling and compliance with this standard**

#### **B.1 Sampling**

##### **B.1.1 General**

The sampling procedure given in B.1.3 shall be applied in determining whether a lot complies with the relevant requirements of this standard. The samples so drawn shall be deemed to represent the lot.

##### **B.1.2 Definitions**

###### **B.1.2.1**

###### **defective**

test sample of the kerosene that fails in one or more respects to comply with the relevant requirements of this standard

###### **B.1.2.2**

###### **lot**

quantity of kerosene in containers bearing the same brand name or trademark, grade designation and batch identification, from one manufacturer, and submitted at any one time for inspection and testing

##### **B.1.3 Samples for inspection and testing**

After inspecting the lot for compliance with the relevant requirements of 7.1 and 7.2, use the relevant sampling procedure given in ASTM D 4057 or ASTM D 4177, as appropriate, to determine whether a lot complies with this standard, and deem the samples so taken to represent the lot for the respective properties.

#### **B.2 Compliance with this standard**

The lot shall be deemed to comply with the relevant requirements of this standard if, on inspection of the containers or tankers in the lot, and on testing of the samples taken in accordance with B.1.3, no defective is found.

## **Annex C** (informative)

### **Quality verification of kerosene for domestic use**

When a purchaser requires ongoing verification of the quality of kerosene, it is suggested that, instead of concentrating solely on evaluation of the final product, he also direct his attention to the manufacturer's quality system. In this connection it should be noted that US ISO 9001 covers the provision of an integrated quality system.

## Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



---

---

ICS nn.nnn.nn

Price based on nn pages