

BRITISH STANDARD

Automotive fuel – High octane (super) unleaded petrol – Specification

ICS 75.160.20



NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

Publishing and copyright information

The BSI copyright notice displayed in this document indicates when the document was last issued.

© BSI 2006

ISBN 0 580 47929 3

The following BSI references relate to the work on this standard:

Committee reference PTI/2

Draft for comment 05/30115924 DC

Publication history

First published 1992

Second edition 1998

Third edition 2000

Amendments issued since publication

Amd. no.	Date	Text affected
16679 Corrigendum No. 1	September 2006	Table 2 Class F change season from 'Summer' to 'Winter'.

Contents

Foreword *iii*

1	Scope	<i>1</i>
2	Normative references	<i>1</i>
3	Sampling	<i>3</i>
4	Composition	<i>4</i>
5	Characteristics	<i>4</i>
6	Precision and dispute	<i>6</i>
7	Marking and labelling	<i>7</i>

Bibliography *9*

List of figures

Figure 1 – Form of mark for super unleaded petrol *8*

List of tables

Table 1 – Requirements and test methods for super unleaded petrol *5*

Table 2 – Seasonal volatility for sale of petrol to consumers *6*

Table 3 – Reproducibility of RON test method *7*

Table 4 – Reproducibility of MON test method *7*

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 9 and a back cover.

Foreword

Publishing information

This British Standard was published by BSI and came into effect on 28 March 2006. It was prepared by Technical Committee PTI/2, *Liquid fuels*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 7800:2000, which is withdrawn.

Information about this document

In preparing this revision the Technical Committee recognized that since the 1992 edition was prepared, a grade of high octane unleaded petrol containing valve seat recession protection additives has become commercially available. That grade is not included in this British Standard.

The first edition of this British Standard was prepared to provide a specification for the quality of high octane unleaded petrol ¹⁾ and was also consistent with the provisions of EEC Directive 85/210/EEC [1] (since withdrawn) concerning the lead and benzene contents of petrol. The quality of leaded petrol is specified in BS 4040, and that of “premium” and “regular” grades of unleaded petrol in BS EN 228. The same EEC Directive also covered the lead and benzene contents of these fuels.

The first edition of this standard was published at the request of the Department of Transport to enable oil companies who wished to market a grade of unleaded petrol with a higher octane rating than that defined as “premium” in BS EN 228 to identify such fuels as separate from the “premium” unleaded grade. In this British Standard, provision was made for a high octane grade of unleaded petrol with a minimum research octane number (RON) of 98 and for uniform marking.

This standard specifies maximum lead and benzene contents, minimum values for research octane number (RON) and motor octane number (MON), and defines limiting requirements for other essential properties. It also incorporates requirements for volatility levels appropriate to seasonal temperature variations in the UK for petrol supplied to and sold from filling stations, in line with those in BS EN 228.

The fuels covered by this standard are intended for use in petrol-engined road vehicles which require high octane unleaded petrol.

On 1 October 1999 RON was reduced from 98 to 97 and MON from 87 to 86 by an announcement in *Update Standards*.

The third edition ensured that the maximum content of oxygenates, olefins, aromatics, benzene and sulfur conformed to EU Directive 98/70/EC [2]. The oxidation stability was increased and a maximum density was introduced.

¹⁾ The term “petrol” is used in this British Standard as being that most generally used by motorists in the UK: “gasoline” and “motor spirit” are alternatives.