ICS 75.160.20 SLOVENSKÁ TECHNICKÁ NORMA Máj 2014

STN	**Skvapalnené ropné plyny. Stanovenie rozpusteného zvyšku. Metóda plynovej chromatografie s použitím kvapaliny pri nástreku do kolóny.**	**STN EN 16423** 65 6479

Liquefied petroleum gases - Determination of dissolved residue - Gas chromatographic method using liquid, on-column injection

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Obsahuje: EN 16423:2013

118816

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2014
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16423

October 2013

ICS 75.160.20

English Version

Liquefied petroleum gases - Determination of dissolved residue - Gas chromatographic method using liquid, on-column injection

Gaz de pétrole liquéfié - Détermination des résidus dissous - Méthode par chromatographie en phase gazeuse avec injection liquide on-column

Flüssiggas - Bestimmung gelöster Rückstände - Gaschromatographisches Prüfverfahren durch Direkteinspritzung von Flüssigkeit auf die Säule

This European Standard was approved by CEN on 31 August 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2013 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 16423:2013: E

Contents

Page

Foreword

This document (EN 16423:2013) has been prepared by Technical Committee CEN/TC 19 “Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2014 and conflicting national standards shall be withdrawn at the latest by April 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Control over the residue content as specified in EN 589 is of considerable importance in end-use applications of Liquefied Petroleum Gas (LPG). Dissolved residual matter, also known as evaporation residue, in LPG is contamination which can occur during production, transportation or storage.

This standard has been developed as a potential replacement of the commonly used methods, as this method of determination:

- is quicker and much more sensitive than manual methods, such as ASTM D2158 [1] or EN 15471 [2], which are based on evaporation of (large) sample volumes followed by visual or gravimetric estimation of residue content;

- provides enhanced sensitivity in measurements of heavier (evaporation) residues compared to EN 15470 [3], with a quantification limit of 10 mg/kg total residue;

- gives both quantitative results and information about contaminant composition such as boiling point range and fingerprint, which can be very useful in tracing the source of a particular contaminant.

1 Scope

This European Standard specifies a method for the determination of the dissolved residual matter, also known as evaporation residue, in liquefied petroleum gases (LPG), by gas chromatography in the range of (10 to 600) mg/kg (ppm mass).

This test method quantifies soluble organic compounds (hydrocarbon materials), sometimes called ‘evaporation residue’, which can be present in liquefied petroleum gases and which are substantially less volatile than the LPG product, i.e. with a boiling point between 174 °C and 522 °C (C_{10} to C_{40}). Higher boiling materials, or materials that adhere permanently to the chromatographic column, will not be detected.

WARNING — This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2 Normative references

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

EN 589, *Automotive fuels — LPG — Requirements and test methods*

EN ISO 4257, *Liquefied petroleum gases — Method of sampling (ISO 4257)*

EN ISO 8973:1999, *Liquefied petroleum gases — Calculation method for density and vapour pressure (ISO 8973:1997)*

ISO 1998-1, *Petroleum industry — Terminology — Part 1: Raw materials and products*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN