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Surface Active Agents - Bio-based surfactants - Requirements and test methods

Grenzflächenaktive Stoffe - Bio-basierte Tenside - Anforderungen und Prüfverfahren

Agents de surface - Agents tensioactifs biosourcés - Exigences et méthodes d'essais

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English Version

**Surface Active Agents - Bio-based surfactants -
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Agents de surface - Agents tensioactifs biosourcés -
Exigences et méthodes d'essais

Grenzflächenaktive Stoffe - Bio-basierte Tenside -
Anforderungen und Prüfverfahren

This draft Technical Specification is submitted to CEN members for Vote. It has been drawn up by the Technical Committee CEN/TC 276.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents

Page

European foreword.....	3
Introduction	4
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	7
4 Generalities on surfactants.....	8
5 Performance	8
5.1 Generalities related to performance.....	8
5.2 Technical performance properties.....	9
5.2.1 Chemical composition	9
5.2.2 Solubility	9
5.2.3 Surface and interfacial tension	9
5.2.4 Foaming power	9
5.2.5 Wetting performance.....	9
5.2.6 Emulsion power.....	10
6 Health, safety and environmental requirements	10
7 Bio-based content	10
7.1 Generalities	10
7.2 Surfactant classification	11
7.3 Analytical approach	11
8 Sustainability	12
9 End of life.....	12
10 Declaration and product labelling.....	13
Bibliography.....	14

European foreword

This document (FprCEN/TS 17035:2016) has been prepared by Technical Committee CEN/TC 276 “Surface active agents”, the secretariat of which is held by AFNOR.

This document is currently submitted to the Vote on TS.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been prepared under Mandate M/491 [10] of the European Commission, addressed to CEN for the development of European Standards for solvents and surfactants in relation to bio-based product aspects. It has been prepared by CEN/TC 276/WG 3 “Bio-surfactants”, the secretariat of which is held by AFNOR.

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Introduction

Bio-based raw materials have been used for millennia in the manufacture of surfactants, e.g. the first surfactant used by mankind, was already completely bio-based – soap. With the advent of modern surfactants in the early 20th Century, petrochemical-based raw materials also became of interest. They offered the opportunity to tune the surfactant properties, in a broader sense, to their various applications.

The last decades have seen the emergence of new bio-based raw materials for surfactants. Some of the reasons for the increased interest lie in the bio-based products' potential benefits in relation to the depletion of fossil resources and climate change.

Acknowledging the need for common standards for bio-based products, the European Commission issued Mandate M/492¹⁾, resulting in a series of standards developed by CEN/TC 411, with a focus on bio-based products other than food, feed and biomass for energy applications.

The standards of CEN/TC 411 “Bio-based products” provide a common basis on the following aspects:

- common terminology²⁾;
- bio-based content determination;
- Life Cycle Assessment (LCA)³⁾;
- sustainability aspects⁴⁾;
- declaration tools.

It is important to understand what the term “bio-based product” covers and how it is being used. The term “bio-based” means “derived wholly or partly from biomass”. It is essential to characterize the amount of biomass contained in the product by, for instance, its (total) bio-based content or bio-based carbon content.

The bio-based content of a product itself does not provide information on its environmental impact or sustainability, which may be assessed through Life Cycle Inventory (LCI), LCA and sustainability criteria. In addition, transparent and unambiguous communication within bio-based value chains is facilitated by a harmonized framework for certification and declaration.

Breaking down the horizontal standards to bio-based products like bio-based surfactants, the European Commission issued Mandate M/491, resulting in standards developed by CEN/TC 276. This Technical Specification has been developed with the aim to fulfil part of the Mandate to describe the technical requirements of bio-based surfactants. The criteria for “bio-based surfactants” published in this Technical Specification are complementary to the horizontal standards by CEN/TC 411.

Surfactants are products which have the ability to reduce interfacial/surface tension, wet surfaces, suspend materials or emulsify oils and fats. In Europe, thousands of producers, manufacturers and

1) A mandate is a standardization task embedded in European trade laws. The M/492 Mandate is addressed to the European Standardization bodies, i.e. CEN, CENELEC and ETSI, for the development of horizontal European Standards for bio-based products. The M/491 Mandate is addressed to the development of European Standards for bio-solvents and bio-surfactants.

2) EN 16575.

3) EN 16760.

4) EN 16751.