

Surface active agents — Foaming power and antifoaming power — Turbine stirring method

The European Standard EN 13996:2002 has the status of a
British Standard

ICS 71.100.40

National foreword

This British Standard is the official English language version of EN 13996:2002.

The UK participation in its preparation was entrusted to Technical Committee CII/34, Methods of test for surface active agents, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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This British Standard, having been prepared under the direction of the Materials and Chemicals Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 6 December 2002

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Surface active agents - Foaming power and antifoaming power - Turbine stirring method

Agents de surface - Pouvoir moussant et pouvoir
antimoussant - Méthode d'agitation par turbine

Grenzflächenaktive Stoffe - Schäumvermögen und
Entschäumerwirkung - Verfahren mittels Turbinenrührgerät

This European Standard was approved by CEN on 9 September 2002.

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Foreword

This document (EN 13996:2002) has been prepared by Technical Committee CEN /TC 276 "Surface active agents", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by April 2003 and conflicting national standards shall be withdrawn at the latest by April 2003.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies a method for measuring the foaming power of a surface active agent and the antifoaming power of a defoamer with regard to a foaming solution.

The method is applicable to all surface active agents and particularly to low foaming products and antifoaming surface active agents.

However, measurement of the foaming power of solutions of readily hydrolyzable agents does not give valid results, as the hydrolysis products gather in the films of liquid and affect the persistence of the foam.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 12829, *Surface active agents - Preparation of water with known calcium hardness (ISO 2174:1990 modified)*.

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*.

ISO 607, *Surface active agents and detergents - Methods of sample division*.

ISO 1042, *Laboratory glassware - One-mark volumetric flasks*.

ISO 4788, *Laboratory glassware - Graduated measuring cylinders*.

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

foam

mass of gas cells separated by thin films of liquid and formed by the juxtaposition of bubbles, giving a gas dispersed in a liquid

3.2

foaming power

ability to produce foam

NOTE In this European Standard, foaming power is characterised by the volume of foam obtained immediately and the evolution of this volume during the 15 min following its formation, under specific experimental conditions.

3.3

foaming agent

substance which, when introduced into a liquid, confers on it an ability to form foam

3.4

antifoaming agent

defoamer

substance which prevents the formation of a foam or considerably reduces foam persistence

NOTE Antifoaming power is defined in relation to defined solutions of reference foaming agents such as saponin or nonylphenol with 10 ethylene oxide molecules (NP 10 EO).