

Annulé

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 453

iTeh STANDARD PREVIEW
SURFACE ACTIVE AGENTS
(standards.iteh.ai)
GLOSSARY

FIRST LIST

[ISO/R 453:1965](https://standards.iteh.ai/catalog/standards/sist/18ab2f43-1fc7-4528-84f0-9eff0d4092ba/iso-r-453-1965)

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BRIEF HISTORY

The ISO Recommendation R 453, *Surface Active Agents. Glossary. First List*, was drawn up by Technical Committee ISO/TC 91, *Surface Active Agents*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1960 and led, in 1962, to the adoption of a Draft ISO Recommendation.

In October 1963, this Draft ISO Recommendation (No. 607) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Argentina	Hungary	Portugal
Austria	Italy	Republic of South Africa
Canada	Japan	Romania
Chile	Korea, Rep. of	Spain
Czechoslovakia	Netherlands	Switzerland
France	New Zealand	U.A.R.
Germany	Norway	United Kingdom
Greece	Poland	Yugoslavia

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in November 1965, to accept it as an ISO RECOMMENDATION.

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INTRODUCTION

The following definitions relate to systems in which liquid is present.

iTeh STANDARD PREVIEW

1. PURPOSE

The purpose of this ISO Recommendation is to define some of the general terms most frequently used in the field of surface active agents.

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2. DEFINITIONS

2.1 Surface active agent

A chemical compound which, when dissolved or dispersed in a liquid, is preferentially adsorbed at an interface, giving rise to a number of physico-chemical or chemical properties of practical interest.

The molecule of the compound includes at least one group with an affinity for markedly polar surfaces, ensuring in most cases solubilization in water, and a group which has little affinity for water.

NOTE. — Compositions in practical use are generally mixtures of such compounds.

2.2 Polar group

A functional group, in which the distribution of electrons tends to give a considerable electrical dipole moment to the molecule. Such a group conditions the affinity for markedly polar surfaces, the affinity for water in particular and the hydrophilic character of the molecule.

2.3 Non-polar group

The organic part of the molecule, in which the distribution of electrons does not cause a considerable electrical dipole moment. Such a group conditions the affinity for organic solvents of low polarity and consequently the lipophilic character of the molecule.

2.4 Polar - non-polar structure

The structure of a molecule which has at least one polar group and a large non-polar group. Such a structure conditions the hydrophilic and lipophilic character of the molecule.

2.5 Surface activity

All the properties particular to the surface active agents in solution and operating at the interfaces.

2.6 Hydrophilic-lipophilic ratio

The relative power of the polar group or groups and of the non-polar part conditions the affinities of the molecule for water and for organic solvents of low polarity respectively. The relation between these affinities represents the hydrophilic-lipophilic ratio of the compound.

NOTE. — This definition relates only to emulsifying agents.

2.7 Anionic surface active agent

A surface active agent which has one or more functional groups and ionizes in aqueous solution to produce negatively charged organic ions responsible for the surface activity.

2.8 Cationic surface active agent

A surface active agent which has one or more functional groups and ionizes in aqueous solution to produce positively charged organic ions responsible for the surface activity.

2.9 Ampholytic surface active agent

A surface active agent having one or more functional groups which, depending on the conditions of the medium, can be ionized in an aqueous solution and give to the compound the characteristics of an anionic or a cationic surface active agent.

This ionic behaviour is similar to that of amphoteric compounds in the broadest sense.

2.10 Non-ionic surface active agent

A surface active agent which does not produce ions in an aqueous solution. The solubility in water of non-ionic surface active agents is due to the presence in the molecules of functional groups which have a strong affinity for water.