

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 817

NUMBER DESIGNATION OF ORGANIC REFRIGERANTS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 817, *Number designation of organic refrigerants*, was drawn up by Technical Committee ISO/TC 86, *Refrigeration*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1960 and led, in 1966, to the adoption of a Draft ISO Recommendation.

In March 1967, this Draft ISO Recommendation (No. 1152) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Argentina	Greece	Switzerland
Australia	Hungary	Thailand
Belgium	Ireland	U.A.R.
Canada	Israel	United Kingdom
Chile	Italy	U.S.A.
Czechoslovakia	Japan	U.S.S.R.
Denmark	New Zealand	Yugoslavia
France	Poland	
Germany	Sweden	

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 September 1968, to accept it as an ISO RECOMMENDATION.

NUMBER DESIGNATION OF ORGANIC REFRIGERANTS

1. SCOPE

This ISO Recommendation is intended to establish a simple system of referring to common organic refrigerants instead of using the chemical name, formula or trade name. Although the use of a number for each refrigerant covered is a concise and accurate way of designating the refrigerant, there is no intention of precluding the use of a chemical name or formula.

2. DEFINITIONS

- 2.1 *Refrigerant.* As covered in this ISO Recommendation, is the medium of heat transfer in a refrigerating system which absorbs heat by evaporating at a low temperature and a low pressure, and gives up heat on condensing at a higher temperature and pressure.
- 2.2 *Compound.* A substance formed by a union of two or more elements in definite proportions by mass.
- 2.3 *Hydrocarbon.* A compound containing only the elements hydrogen and carbon.
- 2.4 *Halocarbon.* Used to define a halogenated hydrocarbon containing one or more of the following four halogens : fluorine, chlorine, bromine, and iodine.
- 2.5 *Isomer.* One of a group of compounds having the same combination of elements, but arranged spatially in different ways.
- 2.6 *Mixture.* A complex of two or more compounds which do not bear a fixed proportion to one another, and which, however thoroughly mixed together, retain a separate existence.
- 2.7 *Azeotrope.* A mixture of refrigerants whose vapour and liquid phases have identical compositions at a given temperature.

3. CLASSIFICATION

Refrigerants are classified as indicated in the nomenclature given in the Table, pages 6, 7 and 8. Other refrigerants will be added through subsequent revisions.