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**Aerospace — Fluid systems —  
Vocabulary —**

**Part 3:  
General terms and definitions relating  
to temperature**

*Aéronautique et espace — Systèmes de fluides — Vocabulaire —  
Partie 3: Termes généraux et définitions relatifs aux températures*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

This second edition cancels and replaces the first edition (ISO 8625-3:1991), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [Clause 2](#) has been added, moving the “Terms and definitions” to [Clause 3](#);
- [Clause 3](#) has been technically revised and editorially reworked;
- the example for a definition at the beginning of [Clause 3](#) has been deleted;
- the definitions in [Clause 3](#) have been renumbered accordingly;
- the definitions of all terms have been revised, except for *fluid temperature*, and *pour point*; and
- the “Alphabetical Index” has been deleted.

A list of all parts in the ISO 8625 series can be found on the ISO website.

# Aerospace — Fluid systems — Vocabulary —

## Part 3:

# General terms and definitions relating to temperature

## 1 Scope

This document defines general terms relating to temperature in fluid systems used in aerospace construction.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **ambient temperature**

temperature of the environment in which the hydraulic fluid, component or system is being operated

### 3.2

#### **autoignition temperature**

lowest temperature at defined atmospheric conditions at which the fluid flashes into flame without an external ignition source and continues burning

Note 1 to entry: The value can be determined by one of several existing test methods.

### 3.3

#### **cold-start temperature**

lowest temperature at which operation of the hydraulic system can be expected to be started

Note 1 to entry: Full performance does not necessarily have to be met.

### 3.4

#### **equipment temperature**

temperature of the unit at a specified position

### 3.5

#### **extreme operating temperature**

peak temperature during operation of a component or system which does not lead to a failure or permanent degradation of the system or component

Note 1 to entry: The time of duration is limited and extreme operating temperatures are outside of the normal operating conditions. Full performance does not necessarily have to be met.

**3.6**

**fire point**

lowest temperature at defined atmospheric conditions at which the vapour of a fluid will continue to burn after ignition by an external source

**3.7**

**flash point**

lowest temperature at defined atmospheric conditions at which the vapour of a fluid will continue to burn after ignition by an external source as long as this source is present

**3.8**

**fluid temperature**

temperature of the fluid measured at a specified point in the system

**3.9**

**inlet temperature**

fluid temperature at the plane of the inlet port of the hydraulic component

**3.10**

**maximum fluid temperature**

highest fluid temperature at which a hydraulic component and/or system operates continuously without degradation in performance and without damage

**3.11**

**normal fluid operating temperature**

stabilized fluid temperature normally reached during continuous operation

**3.12**

**outlet temperature**

fluid temperature at the plane of the outlet port of the hydraulic component

**3.13**

**pour point**

lowest temperature at which a fluid will flow under specified conditions

**3.14**

**storage temperature**

temperature range within which a fluid or hydraulic component is stored, without degradation of reliability, performance and life

**3.15**

**survival temperature**

extreme temperature outside of specified temperature range at which the fluid or hydraulic component or system has to endure without functioning but will subsequently function with no degradation in performance when the temperature returns to within normal operating temperature range

**3.16**

**temperature range of equipment**

temperature range within which the component can be expected to operate without degradation of reliability, performance, or life following stabilization after long duration exposure to fluid and ambient temperatures

Note 1 to entry: This is not a physical property of the unit but a result of the heat transfer characteristics of the system in which the unit is installed.

**3.17**

**temperature range of fluid**

specified range of fluid temperature for satisfactory operation of a system or any degradation of fluid chemical properties