



National Standard of the People's Republic of China

GB/T 16475—2008
Replace GB/T 16475—1996

Temper designation system for wrought aluminum and aluminum alloy

(ISO 2107:2007, Aluminum and Aluminum Alloys—
Wrought products—Temper designations, MOD)

Issue date 2008-06-17

Implementation date 2008-12-01

Issued by General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China
Standardization Administration of the People's Republic of China

Foreword

This standard is modified in relation to ISO 2107:2007 *Aluminum and aluminum alloys—Wrought products—Temper designations*, and has been redrafted according to ISO 2107:2007. An overall table of comparisons between the articles and chapters of this specification and the corresponding ones of international specification is given in informative Appendix B for the purpose of convenient comparison.

This standard has made some alterations while it adopting international standards. These technical disparities have been marked with single vertical lines at corresponding positions at the page margin on the related articles. The main technical differences between the national standard and the international standard adopted are as follows:

- Amended some editing formats according to the Chinese language practice
- Amended some expressions of international standards to those of Chinese standards
- Because Chapter 2 “Terms and Definitions” of ISO 2107:2007 has been adopted by GB/T 8005.1 *Aluminum and aluminum alloys—Terms and definitions Part 1: Product and method of processing and treatment*, so do not bring into this standard
- Add W and O1 temper usually did not use by a delivery temper
- Add H32A temper, which only used in China
- Add T81 temper and T87 temper
- Add the comparison between old temper and new temper for china.

This standard will cancel and replace GB/T 16475—1996 *Temper designation system for Wrought Aluminum and Aluminum Alloy*.

- By comparison this standard with GB/T 16475—1996, There have been some significant changes in this national standard over its previous edition in the following technical aspects:
- Amend H temper, T temper, H112 temper, and H116 temper designations
- Delete T0 temper
- Add O1, O2, O3, H321, HXX4, HXX5, T79, T81, T87 and H32A temper

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—Add ageing curve of T7 temper

—Add informative annex A, Demonstration of response to heat treatment.

Annex A and Annex B of this standard are informative.

This standard was proposed by Nonferrous Industrial Association of China.

This standard is under the jurisdiction of Technical Council of Nonferrous Standardization in China.

The departments responsible for this work are: Southwest Aluminum (group) Co., Ltd. and Institute of Nonferrous Industry of China on Standardization Meterage and Quality.

The units of joint drafting of this standard are: Northeast Light Alloy Co., Ltd., Northwest Aluminum Fabrication Company of China Aluminum Co., Ltd.

This standard was drafted by: Li Ruishan, Ge lixin, You Jianghai, Wang Zhengan, Liu Yuanchao, Wang Guojun, Duan Ruifen, Wu Xinfeng, He Xinyu.

The former edition that is replaced by this standard is:

—GB/T 16475—1996.

Temper designation system for wrought aluminum and aluminum alloy

1 Scope

This standard specifies temper designation system for wrought aluminum and aluminum alloy.

This standard is applicable to wrought aluminum and aluminum alloy products that are produced by rolling, extruding, drawing, or forging etc.

2 General

2.1 Temper designation system consists of basic temper and subdivision temper. Basic temper is indicated by a letter. Subdivision temper indicated by one or more digits or letters following the letter of the basic temper. These digits or letters relate to a specific sequence of basic treatments, but only those treatments or operations recognized as significantly influencing the product characteristics are indicated.

2.2 Throughout this national Standard, generalized examples of tempers are shown, as following: “X” denotes an unspecified digit (e. g. ,H2X is generalized to indicate appropriate temper designations in the series H21 to H29); “XX” denotes two unspecified digits (e. g. ,HXX4 is generalized to indicate appropriate temper designations in the H114 to H194 series, the H224 to H294 series, and the H324 to H394 series); “_” denotes one or multiple unspecified digits (e. g. ,T_51 is generalized to indicate appropriate temper designations such as T351, T651, T6151, T7351, and T7651, etc.).

3 Basic temper designations

3.1

F—as fabricated

This designation applies to products of shaping processes in which no special requirements over thermal conditions or strain hardening is applied this temper. There are no mechanical property limits specified.

3.2

O—annealed

This designation applies to wrought products that are annealed to obtain the lowest strength temper.