
**Plastics — Joining of thermoplastic
moulded components — Specification
of variables for thermal joining
processes**

*Plastiques — Assemblage de composants thermoplastiques moulés —
Spécification de variables pour les procédés d'assemblage thermique*



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Foreword

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document has been developed to help organizations better understand and implement controls with thermal joining processes through the use of thermal joining process specifications.

Plastics — Joining of thermoplastic moulded components — Specification of variables for thermal joining processes

1 Scope

This document specifies the minimum essential variables in order to produce a component of the required consistency and quality for the following thermal joining processes:

- ultrasonic welding/staking/spot welding;
- infrared welding;
- hot gas convection welding;
- linear vibration welding;
- orbital vibration welding;
- spin welding;
- laser welding;
- hot plate welding;
- heat staking: hot air;
- heat staking: electrical; and
- heat staking: infrared (IR).

This document defines the thermal joining process specification (TJPS) for each of the thermal joining processes listed above, to ensure that all the essential variables are properly considered, including the qualified range of each variable, in order to establish and maintain component quality at an acceptable level.

NOTE Standards on joining of plastic pipes, fittings, valves and/or auxiliary equipment, and the assessment of the properties of the resulting joints are developed and maintained by ISO/TC 138.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 472, *Plastics — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 and the following apply.

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

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