
**Welding — Test for shop primers in
relation to welding and allied
processes —**

Part 1:
General requirements

*Soudage — Essai sur peintures primaires en relation avec le soudage
et les techniques connexes —*

Partie 1: Exigences générales



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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 17652-1 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Unification of requirements in the field of metal welding*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read "...this European Standard..." to mean "...this International Standard...".

ISO 17652 consists of the following parts, under the general title *Welding — Test for shop primers in relation to welding and allied processes*:

- *Part 1: General requirements*
- *Part 2: Welding properties of shop primers*
- *Part 3: Thermal cutting*
- *Part 4: Emission of fumes and gases*

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Foreword

This document (EN ISO 17652-1:2003) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DS, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2003, and conflicting national standards shall be withdrawn at the latest by November 2003.

EN ISO 17652 consists of the following parts, under the general title: *Welding – Test for shop primers in relation to welding and allied processes*:

- *Part 1: General requirements*
- *Part 2: Welding properties of shop primers*
- *Part 3: Thermal cutting*
- *Part 4: Emission of fumes and gases*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of this European Standard specifies standardised conditions for an assessment of shop primers on the weldability of steel materials. The standard is intended to be used for assessment of shop primers by:

- testing by the suppliers during development of new shop primers;
- testing by the suppliers during production as part of a quality control scheme;
- declaration of the properties of shop primers by suppliers;
- use as a reference in contracts between suppliers and customers for deliveries of shop primers;
- acceptance testing of shop primers by customers.

The standard can also be used for comparisons between different shop primers using the welding procedure appropriate for the task, or between the different welding procedures using a specific shop primer. For guidance on application see clause 4.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 17652-2:2003, *Welding - Test for shop primers in relation to welding and allied processes - Part 2: Welding properties of shop primers (ISO 17652-2:2003)*.

EN ISO 17652-3, *Welding - Test for shop primers in relation to welding and allied processes - Part 3: Thermal cutting (ISO 17652-3:2003)*.

EN ISO 17652-4, *Welding - Test for shop primers in relation to welding and allied processes - Part 4: Emission of fumes and gases (ISO 17652-4:2003)*.

3 Terms and definitions

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

3.1

emission test

this test describes a method for evaluating the influence of shop primers on the emission of fumes and gasses during welding

3.2

rating test

this screening test provides a method of assessing the relative weldability of shop primers of a specified thickness by making a standard weld over a range of shop primers and subsequently evaluating of the severity of the resulting porosity

3.3

shop primer

primer made for corrosion protection of steel in the production period. The shop primer is applied uniformly in a controlled thickness to abrasive blasted steel plates. It should be possible to weld and cut shop primed materials. The demand on corrosion protection may vary from one application to another. The term prefabrication primer is equivalent to shop primer

3.4

supplier

manufacturer of shop-primer

3.5

supplier's recommendation

supplier's specification for the practical application of the shop primer

3.6

test of cutting properties

this test describes a method for evaluating the influence of shop primers on thermal cutting. The test conditions and quality level have been chosen to eliminate other variables so that the speed is the variable being measured

3.7

weldability test

this test describes a method for evaluating the weldability of welding consumables and shop primer combinations, using various arc welding processes. A standard size fillet is produced that enables comparison to be made. An overall assessment of the quality of the resultant weld is made

4 Guidance on application

Any application shall include a reference to the part(s) of EN ISO 17652 to be used and a statement of the requirements to be fulfilled, as required. EN ISO 17652-1, clause 3 and 5 apply to all applications. Applications are detailed in the following tables:

Table 1 - Application for comparison of shop primers (rating), using standardised procedures

Comparison of shop primers (rating) in relation to:	Reference shall be made to the following part:
Welding properties of shop primers	EN ISO 17652-2:2003, clause 4, Rating test.
Thermal cutting properties	EN ISO 17652-3, all clauses.
Emission of fumes and gases during welding	EN ISO 17652-4, all clauses.

Table 2 - Application for comparison of different procedures (intended for application in production) for the same primer

Comparison of different procedures (intended for application in production) for the same primer in relation to:	Reference shall be made to the following part:
Welding properties of shop primers	Use test methods specified in EN ISO 17652-2:2003, clause 5: Weldability test. Application not suitable for contractual purposes.
Thermal cutting properties	Use test methods specified in EN ISO 17652-3 for the actual cutting procedures. Application not suitable for contractual purposes.
Emission of fumes and gases during welding	Not covered by standard.

Table 3 - Application for comparison of different primers for the same procedure (intended for application in production)

Application for comparison of different primers for the same procedure (intended for application in production) in relation to	Reference shall be made to the following part:
Welding properties of shop primers	Use test methods specified in EN ISO 17652-2:2003, clause 5: Weldability test, for both primers for the actual welding procedures and compare results. Application not suitable for contractual purposes.
Thermal cutting properties	See Table 1 (EN ISO 17652-3 specifies the use of cutting procedure intended for application in production).
Emission of fumes and gases during welding	Not covered by standard.

5 Health, safety and environment

Shop primers emit solvents during the application and curing. Further, shop primers may augment the emissions of fumes and gases during welding and cutting.

Proper precautions shall be taken during application, curing, welding and cutting in order to protect the personnel involved in the testing.

Environmental aspects during testing shall also be taken into account, like reduction of emissions and the use of hazardous substances.

NOTE Special care is needed in particular when testing shop primers with unknown properties.

Bibliography

- EN 10238 *Automatically blast-cleaned and automatically prefabricated primed structural steel products.*
- EN ISO 12944-4 *Paints and varnishes - Corrosion protection of steel structures by protective paint systems – Part 4: Types of surface and surface preparation (ISO 12944-4:1998).*
- EN ISO 12944-5 *Paints and varnishes - Corrosion protection of steel structures by protective paint systems – Part 5: Protective paint systems (ISO 12944-5:1998).*
- EN ISO 12944-7 *Paints and varnishes - Corrosion protection of steel structures by protective paint systems – Part 7: Execution and supervision of paint work (ISO 12944-7:1998).*
- EN ISO 12944-8 *Paints and varnishes - Corrosion protection of steel structures by protective paint systems – Part 8: Development of specifications for new work and maintenance (ISO 12944-8:1998).*

