

INTERNATIONAL
STANDARD

ISO
11177

Second edition
2019-03

**Vitreous and porcelain enamels —
Inside and outside enamelled
valves and pressure pipe fittings for
untreated and potable water supply —
Quality requirements and testing**

*Émaux vitrifiés — Robinetterie et raccords de tuyauterie pour
conduites forcées émaillés à l'intérieur et à l'extérieur destinés à
l'alimentation en eau non traitée et en eau potable — Exigences de
qualité et essais*



Reference number
ISO 11177:2019(E)

© ISO 2019



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

| | Page |
|--|-----------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Sampling | 2 |
| 5 Quality requirements and testing procedures | 2 |
| 5.1 Enamelling surface quality | 2 |
| 5.2 Coat thickness | 2 |
| 5.3 Hardness | 2 |
| 5.4 Resistance to thermal shock | 2 |
| 5.5 Corrosion resistance to water and steam | 3 |
| 5.6 Corrosion resistance to citric acid | 3 |
| 5.7 Corrosion and chemical resistance to acid soil | 3 |
| 5.8 Corrosion and chemical resistance to sub-surface migration of enamel after impact test | 3 |
| 5.9 Corrosion resistance after scratch damage | 4 |
| 5.10 Corrosion resistance after abrasion damage | 4 |
| 5.11 Resistance to climatic exposure and ultraviolet radiation | 4 |
| 5.12 Physiological harmlessness | 4 |
| 6 Test report | 5 |