JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 2381 : 2017

(JWTC/JSA)

General requirements for atmospheric exposure testing

ICS 19.040

Reference number : **JIS Z 2381** : **2017** (**E**)

PROTECTED BY COPYRIGHT

Date of Establishment: 1979-11-01
Date of Revision: 2017-03-21
Date of Public Notice in Official Gazette: 2017-03-21
Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Chemical Products and Analytical Methods

JIS Z 2381:2017, First English edition published in 2017-11

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2017
All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HT/AT

PROTECTED BY COPYRIGHT

Contents

Page

Introduction 1

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Classification and explanation of exposure tests 3

5 Exposure test planning 3

6 Test specimens 3
6.1 Types of test specimens 3
6.2 Shapes and dimensions of test specimens 4
6.3 Number of test specimens 4
6.4 Marking of test specimens 5
6.5 Pretreatment of test specimen for exposure test 5

7 Exposure test site 5
7.1 Environment of exposure test site 5
7.2 Requirements for exposure test sites 6

8 Exposure test apparatus 6

9 Exposure testing method 7
9.1 Azimuth and angle of exposure test surface 7
9.2 Attaching and detaching of test specimens 8
9.3 Exposure test period 9
9.4 Handling of test specimens during exposure test period 10
9.5 Requirements according to types of exposure test 10

10 Environmental factors 16
10.1 General 16
10.2 Measurement of environmental factors 16
10.3 Measurement and indication methods of environmental factors 16
10.4 Other items to be measured 19
10.5 Measuring instruments of environment factors and controls 20

11 General requirements for evaluation test of test specimen for exposure test 21
11.1 Measurement of initial values 21
11.2 Evaluations after start and after end of exposure test 21
11.3 Evaluation test method 21
11.4 Evaluation test items 22

PROTECTED BY COPYRIGHT

12 Test report 22

Annex A (informative) Example of exposure test planning 24

Annex B (informative) Shapes and dimensions of test specimens for exposure test 25

Annex C (informative) Sections of exposure environments 27

Annex D (informative) Environmental factors to be measured according to types of test specimens 31

PROTECTED BY COPYRIGHT

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by the Japan Weathering Test Center (JWTC)/ Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS Z 2381** : 2001 is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

PROTECTED BY COPYRIGHT

General requirements for atmospheric exposure testing

Introduction

This Japanese Industrial Standard was established in 1979 and has gone through three revisions up to the present. The last revision was made in 2001, and the revision at this time is to respond to the advances in technology.

No corresponding International Standard has been established at this point.

1 Scope

This Standard specifies general requirements for atmospheric exposure testing method of industrial materials and industrial products (hereafter referred to as materials and/or products) in the open-air atmosphere and the sheltered atmosphere.

WARNING Persons carrying out tests based on this Standard should be familiar with normal laboratory practice. This Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this Standard to establish appropriate safety and health practices.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7753 *Light-exposure and light-and-water-exposure apparatus (Open-flame carbon-arc type)*

JIS B 7952 *Continuous analyzer for sulfur dioxide in ambient air*

JIS B 7953 *Continuous analyzers for oxides of nitrogen in ambient air*

JIS B 7957 *Continuous analyzers for ozone and oxidants in ambient air*

JIS K 0108 *Methods for determination of hydrogen sulfide in flue gas*

JIS K 7363 *Plastics—Instrumental determination of radiant exposure in weathering tests—General guidance and basic test method*

JIS R 3202 *Float glass and polished plate glass*

JIS Z 2382 *Determination of pollution for evaluation of corrosivity of atmospheres*

JIS Z 8401 *Guide to the rounding of numbers*

3 Terms and definitions

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

PROTECTED BY COPYRIGHT