SRI LANKA STANDARD 1256 : PART 32 : 2016

ISO 4628 - 2 : 2016

UDC 667.6

METHOD OF TEST FOR
PAINTS AND VARNISHES
PART 32 : DETERMINATION OF DEGREE OF BLISTERING

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
METHOD OF TEST FOR PAINTS AND VARNISHES
PART 32: DETERMINATION OF DEGREE OF BLISTERING

SLS 1256 : Part 32 : 2016
ISO 4628 Part 2 : 2016

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Sri Lanka.

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
METHOD OF TEST FOR PAINTS AND VARNISHES
PART 32: DETERMINATION OF DEGREE OF BLISTERING

NATIONAL FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Chemical and Polymer Technology and authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2016-03-23.

This Standard is identical with ISO 4628-2: 2016 Paints and varnishes – Evaluation of degradation of coatings- Designation of quantity and size of defects, and of intensity of uniform changes in appearance Part 2 Assessment of degree of blistering published by the International Organization for Standardization (ISO).

TERMINOLOGY AND CONVENTIONS

The text of the International Standard has been accepted as suitable for publication, without deviation, as a Sri Lanka Standard. However, certain terminology and conventions are not identical with those used in Sri Lanka Standards. Attention is therefore drawn to the following:

a) Wherever the words “International Standard” appear referring to a particular Standards they should be interpreted as “Sri Lanka Standard”.

b) The comma has been used throughout as a decimal marker. In Sri Lanka Standards it is the current practice to use the full point at the base as the decimal marker.

c) Wherever page numbers are quoted, they are ISO page numbers.

Cross References

International Standard	Corresponding Sri Lanka Standard
ISO 13076, Paints and varnishes - Lighting and procedure for visual assessments of coatings.	No corresponding Sri Lanka Standard

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SLS 1256-32 : 2016

INTERNATIONAL STANDARD

ISO 4628-2

Third edition
2016-01-15

Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance —

Part 2: Assessment of degree of blistering

Peintures et vernis — Évaluation de la dégradation des revêtements — Désignation de la quantité et de la dimension des défauts, et de l'intensité des changements uniformes d'aspect —

Partie 2: Évaluation du degré de cloquage

Reference number
ISO 4628-2:2016(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This third edition cancels and replaces the second edition (ISO 4628-2:2003), which has been technically revised with the following changes:

a) a normative reference to ISO 13076 for illumination for the assessment has been added;

b) a note concerning visibility of S1 size of blisters has been added.

ISO 4628 consists of the following parts, under the general title *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance*:

— *Part 1: General introduction and designation system*

— *Part 2: Assessment of degree of blistering*

— *Part 3: Assessment of degree of rusting*

— *Part 4: Assessment of degree of cracking*

— *Part 5: Assessment of degree of flaking*

— *Part 6: Assessment of degree of chalking by tape method*

— *Part 7: Assessment of degree of chalking by velvet method*

— *Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect*

— *Part 10: Assessment of filiform corrosion*

INTERNATIONAL STANDARD ISO 4628-2:2016(E)

Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance —

Part 2: Assessment of degree of blistering

1 Scope

This part of ISO 4628 specifies a method for assessing the degree of blistering of coatings by comparison with pictorial standards.

The pictorial standards provided in this part of ISO 4628 illustrate blisters in the sizes 2, 3, 4, and 5, and each size in the quantities (densities) 2, 3, 4, and 5.

ISO 4628-1 defines the system used for designating the quantity and size of defects and the intensity of changes in appearance of coatings and outlines the general principles of the system. This system is intended to be used, in particular, for defects caused by ageing and weathering, and for uniform changes such as colour changes, for example yellowing.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13076, *Paints and varnishes — Lighting and procedure for visual assessments of coatings*

3 Terms and definitions

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

3.1
degree of blistering
rating characterizing blisters in a coating in terms of quantity (density) and size

4 Assessment

Assess the quantity and size of the blisters in a coating by means of the pictures given in Figure 1 to Figure 4.

NOTE The S1 size of blisters is not visible with normal corrected vision but only with ×10 magnification.

Where the area to be examined exhibits blisters of varying size, quote as the size rating that of the blisters which are typical of the test area.

Carry out the assessment under good illumination, as specified in ISO 13076.

If the assessment is to be done using an optical imaging system, calibrate the system using the images given in Annex A.

5 Expression of results

Express the ratings for the quantity (density) and size of the blisters as given in Figure 1 to Figure 4, together with the approximate dimensions of the area concerned, or its portion of the total area, expressed as a percentage.

For example, if the coating is assessed as having blisters quantity 2, size 2, i.e. matching Figure 1 a), it shall be reported as

— blistering; degree of blistering 2(S2).

6 Test report

The test report shall contain at least the following information:

a) all details necessary to identify the coating examined;

b) a reference to this part of ISO 4628, i.e. ISO 4628-2;

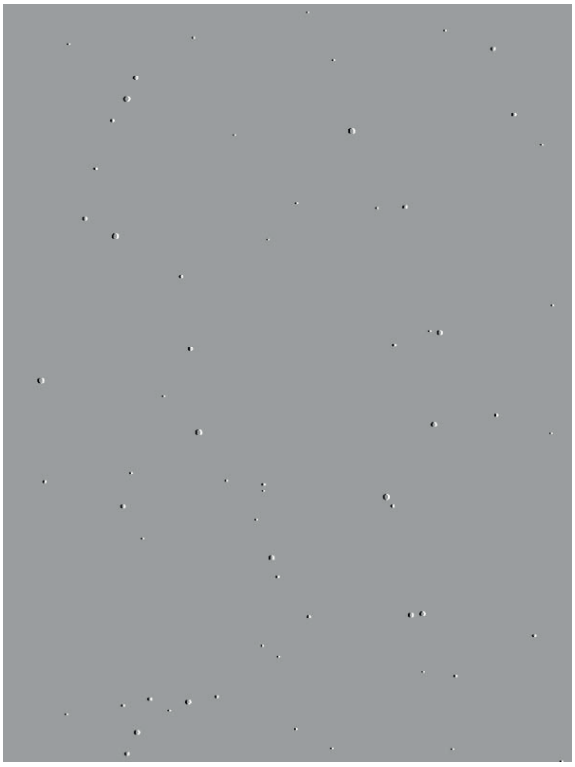
c) the type of surface examined, its size and, if appropriate, its location;

d) the result of the evaluation as indicated in Clause 5;

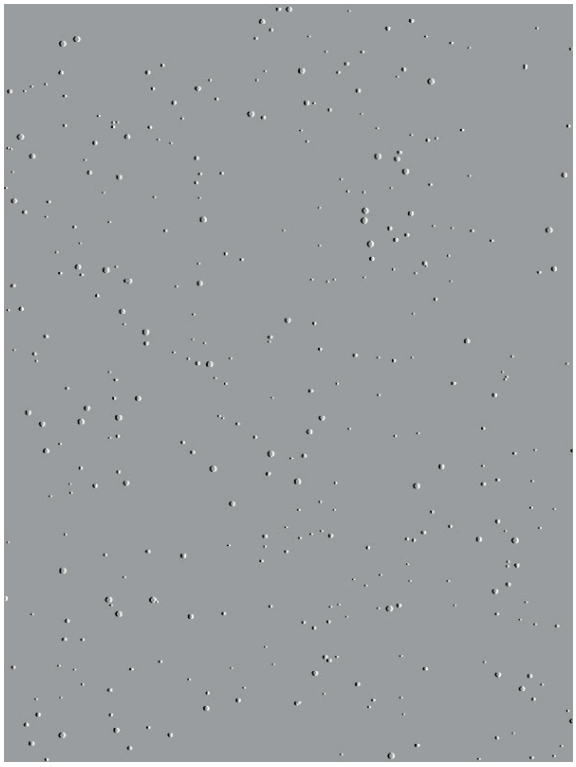
e) an indication of the illumination under which the assessment was carried out;

f) any unusual features (anomalies) noted during the assessment;

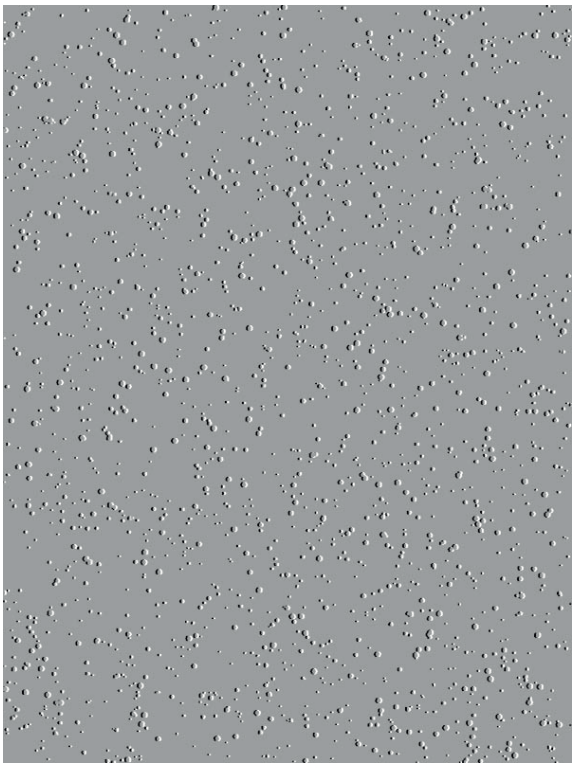
g) the date of the examination.



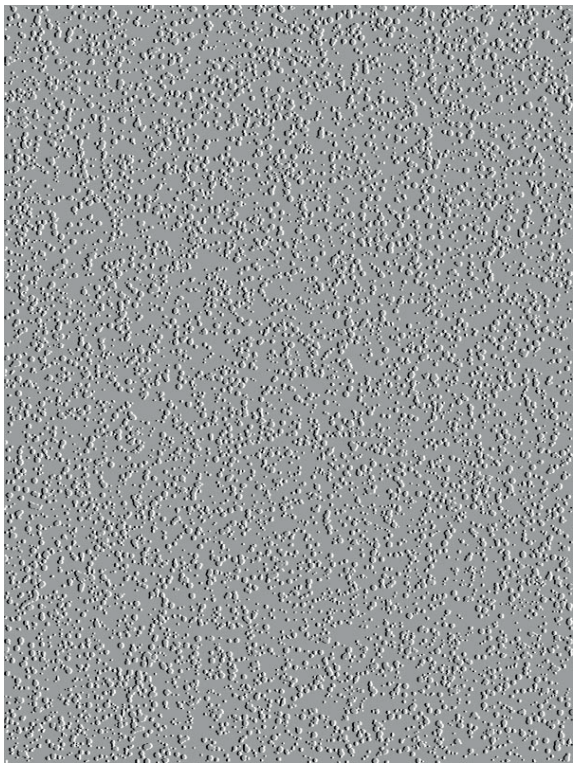
a) Quantity (density) 2 — 2(S2)



b) Quantity (density) 3 — 3(S2)

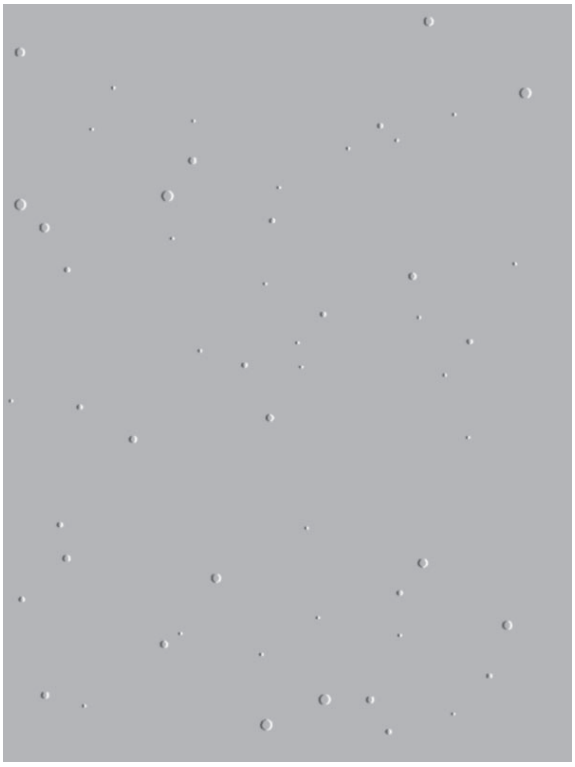


c) Quantity (density) 4 — 4(S2)



d) Quantity (density) 5 — 5(S2)

Figure 1 — Blisters of size 2



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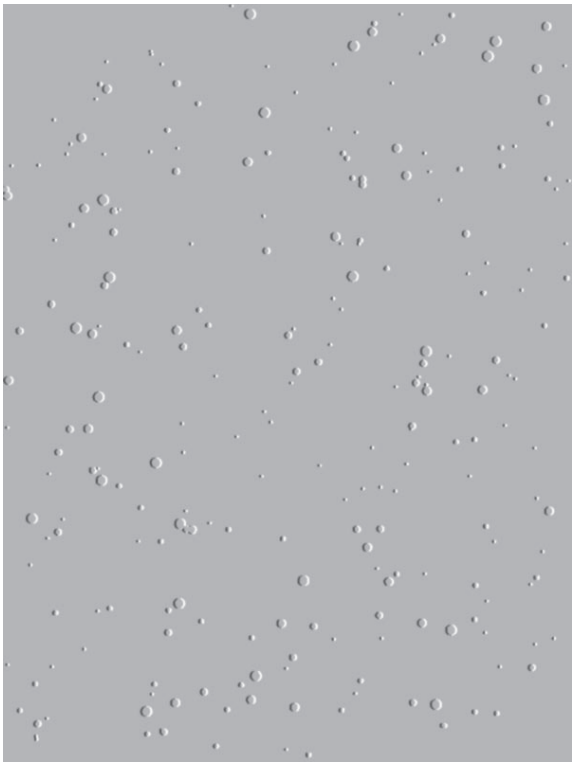

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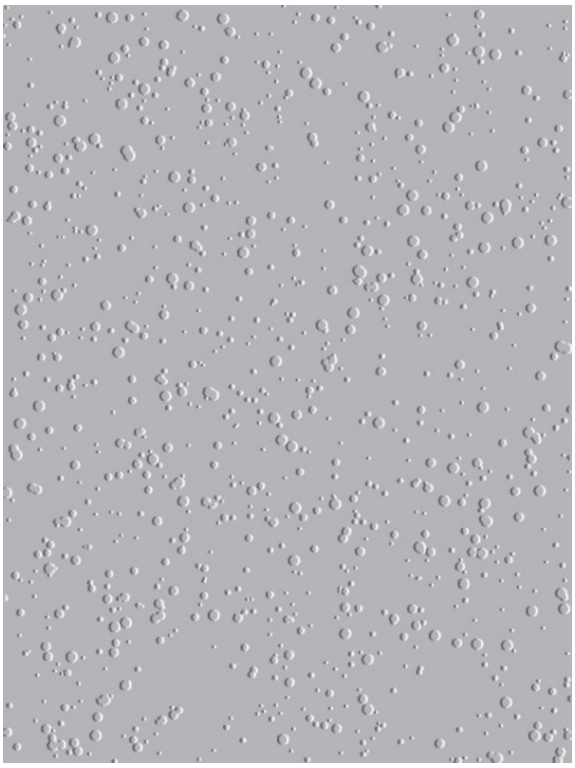

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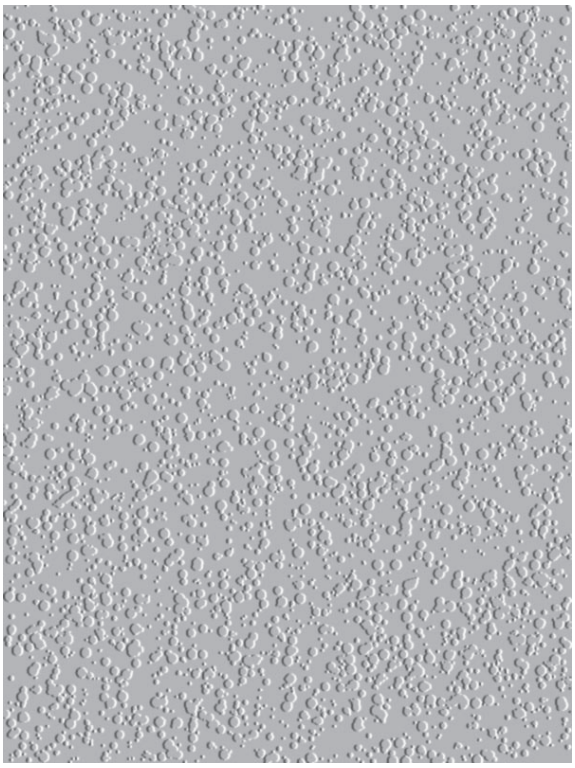
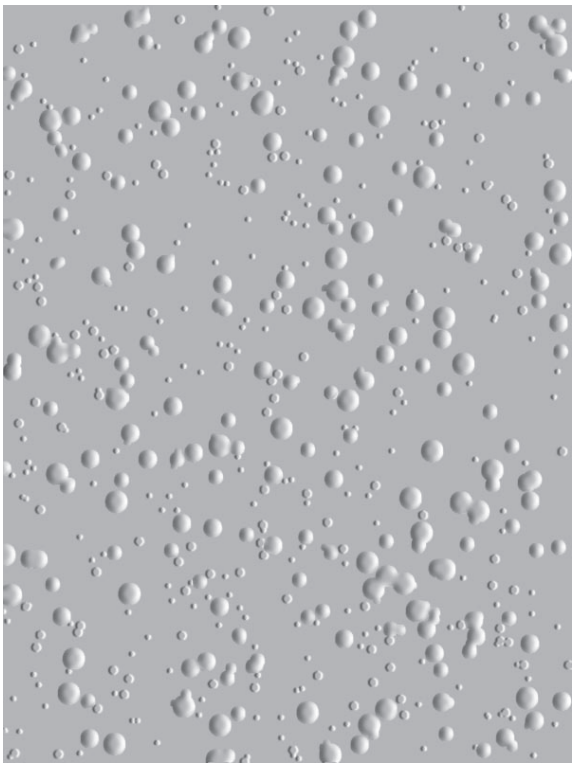


d) Quantity (density) 5 — 5(S3)

Figure 2 — Blisters of size 3

a) Quantity (density) 2 — 2(S4)

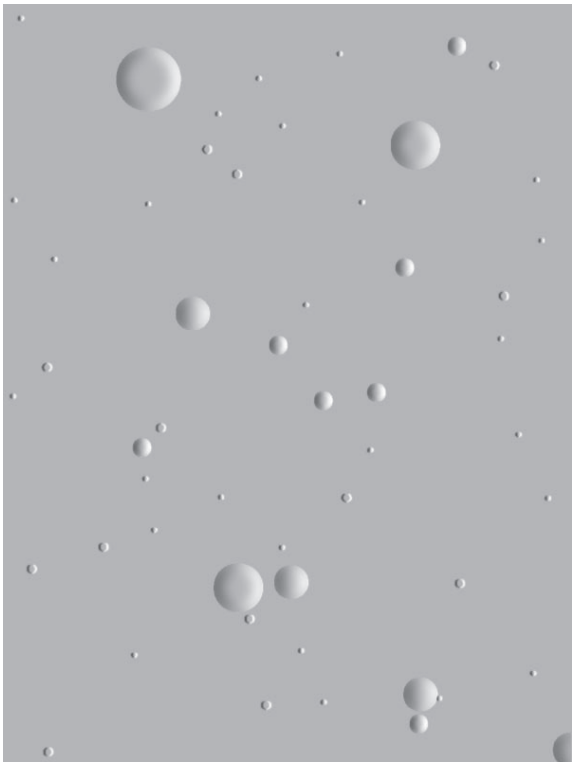
b) Quantity (density) 3 — 3(S4)



c) Quantity (density) 4 — 4(S4)

d) Quantity (density) 5 — 5(S4)

Figure 3 — Blisters of size 4



a) Quantity (density) 2 — 2(S5)

b) Quantity (density) 3 — 3(S5)

c) Quantity (density) 4 — 4(S5)

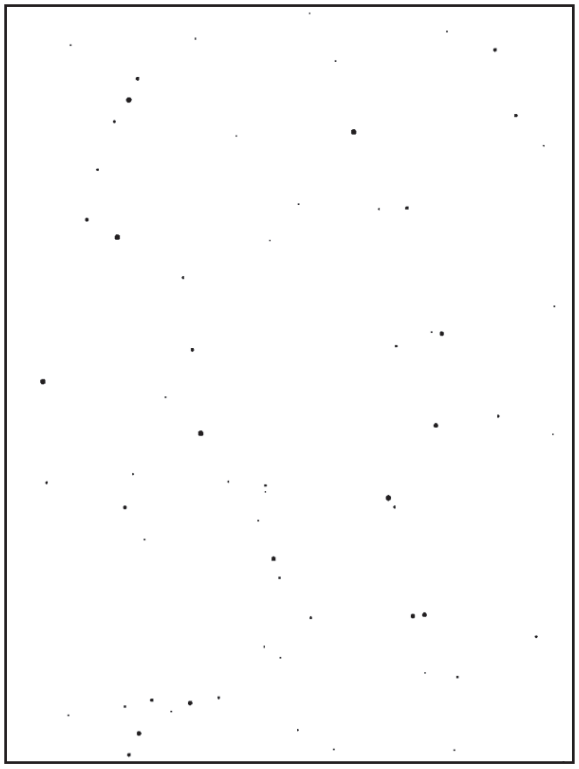
d) Quantity (density) 5 — 5(S5)

Figure 4 — Blisters of size 5

Annex A
(normative)

Calibration images

If the assessment is to be done using an optical imaging system, use the images given in Figure A.1 to Figure A.4 to calibrate the imaging system.



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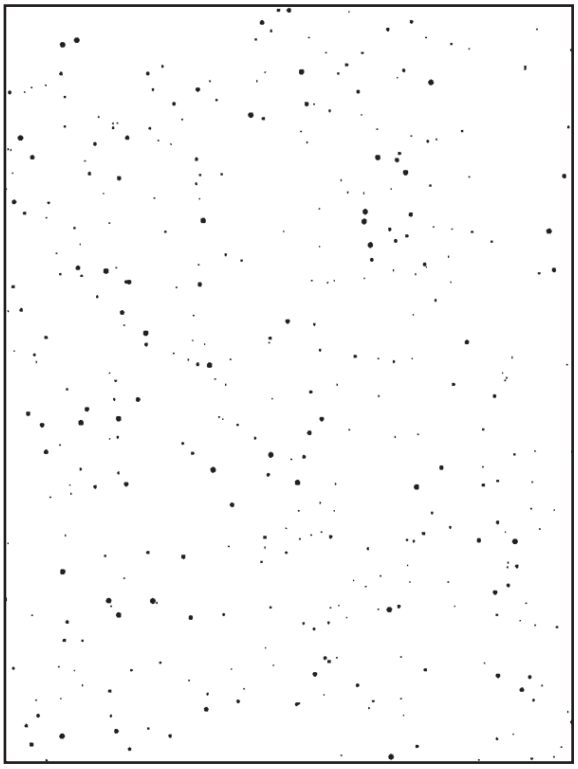

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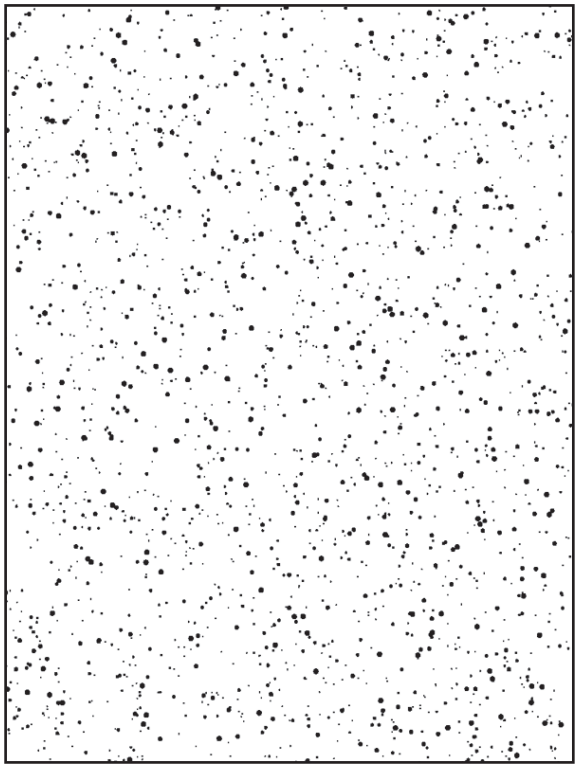

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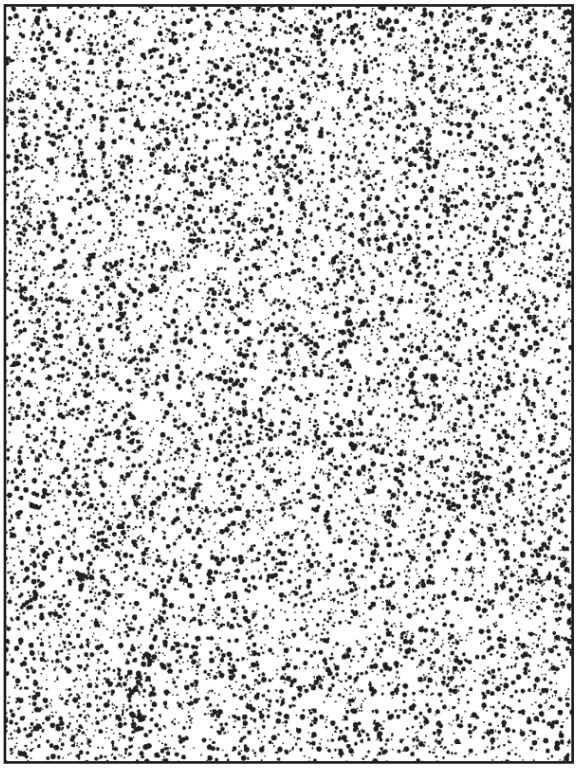
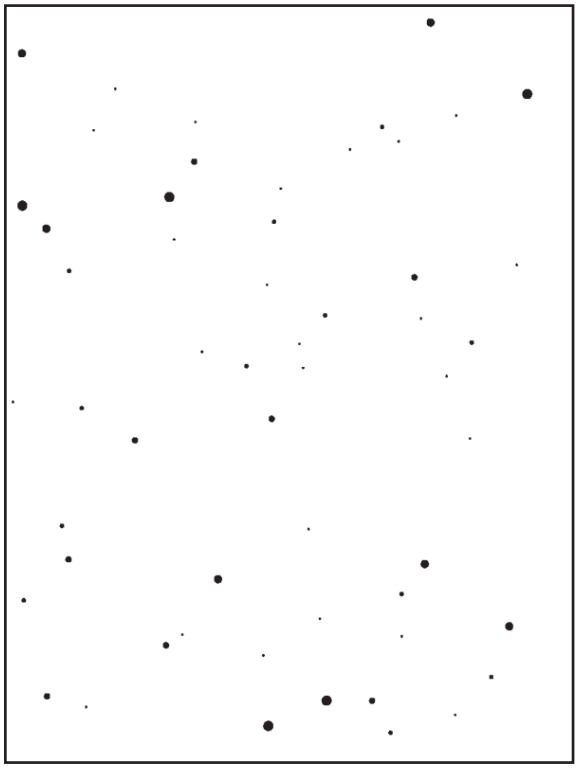


d) Quantity (density) 5 — 5(S2)

Figure A.1 — Blisters of size 2



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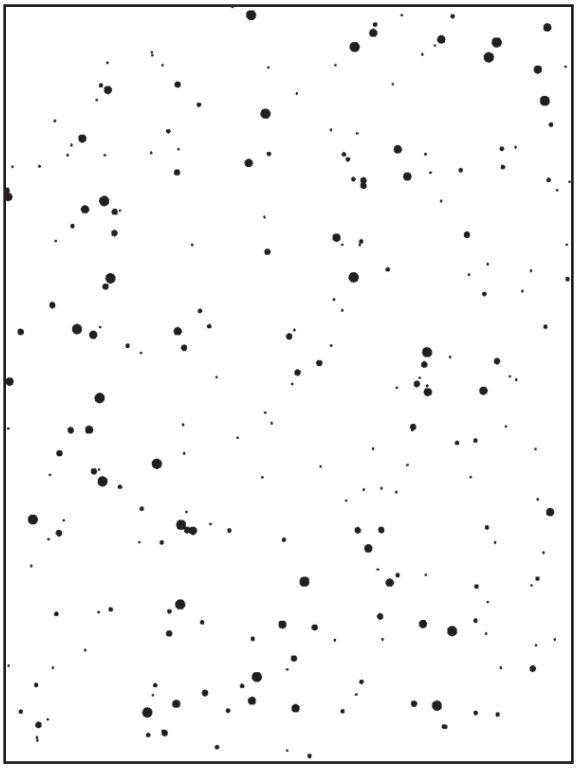

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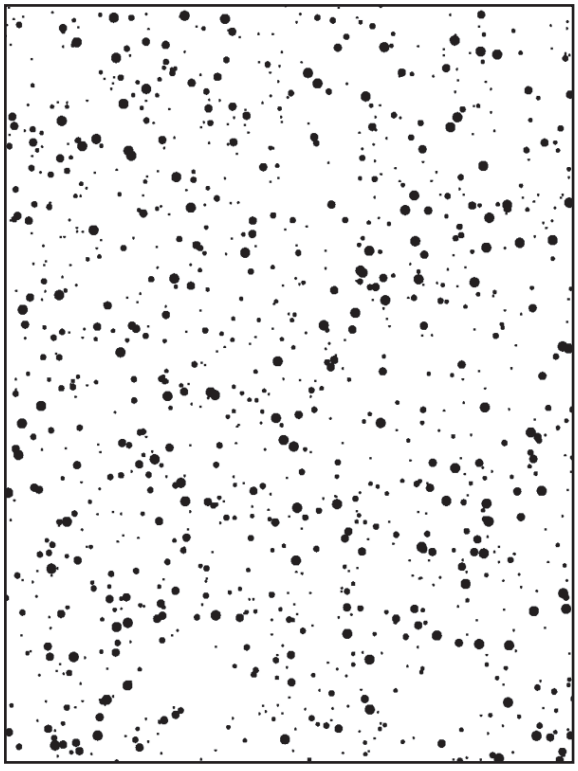

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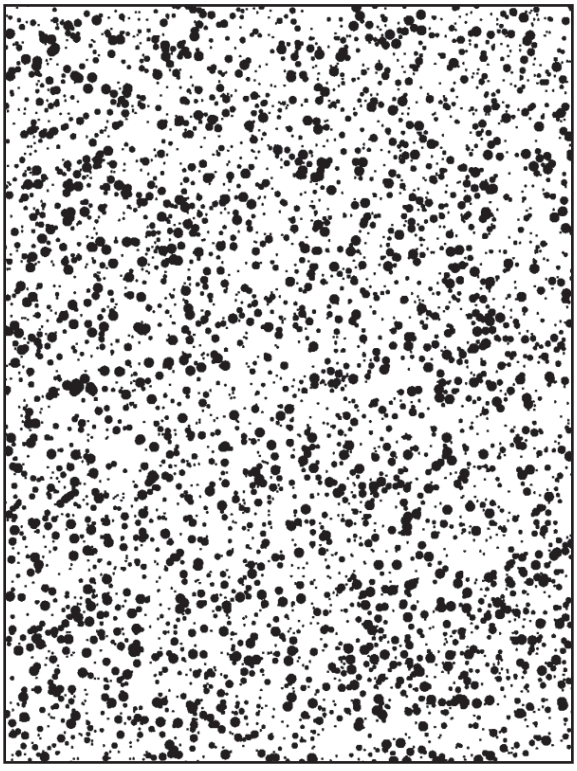
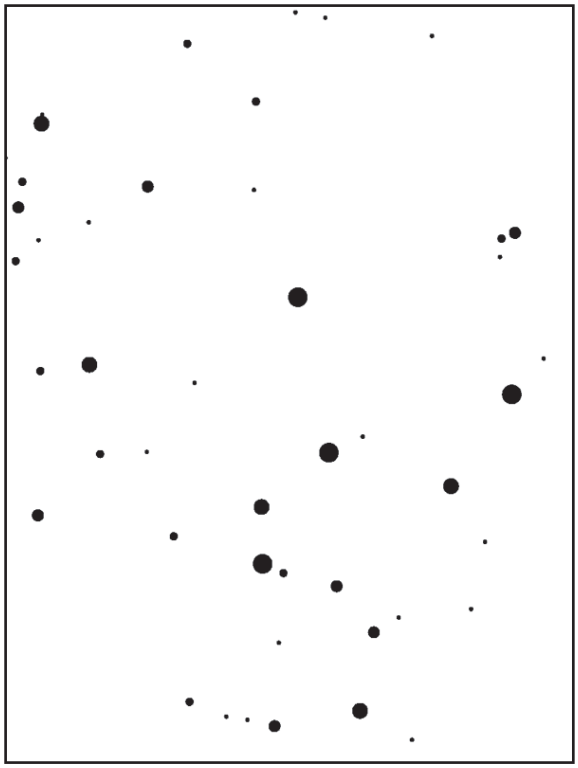


d) Quantity (density) 5 — 5(S3)

Figure A.2 — Blisters of size 3



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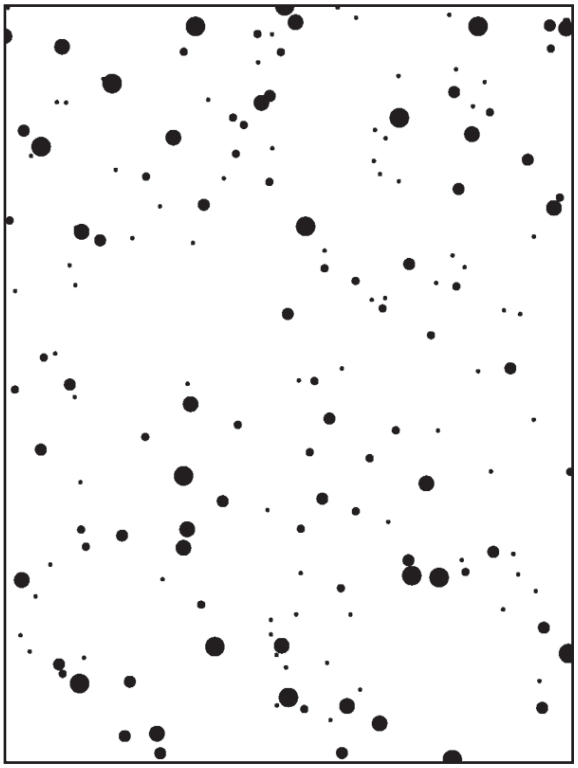

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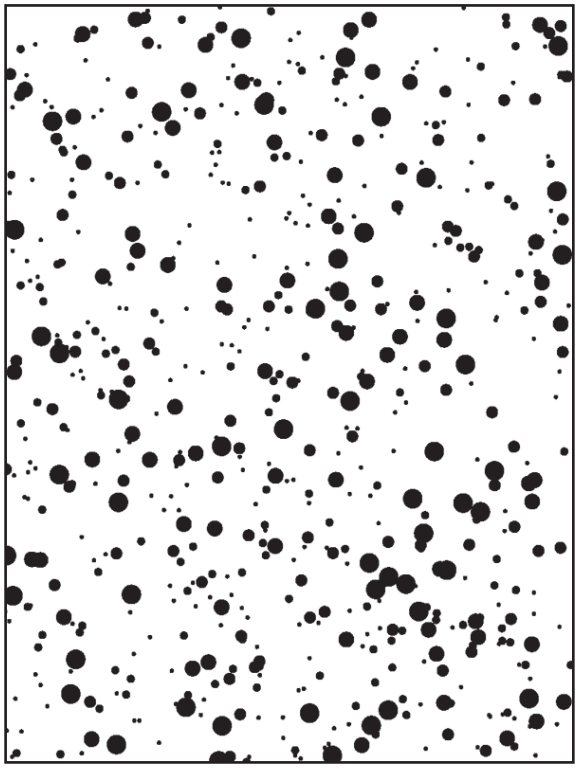

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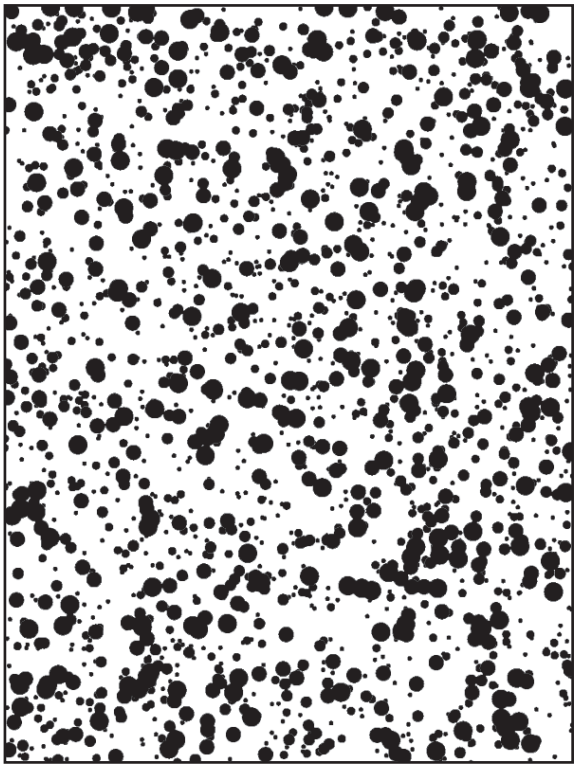
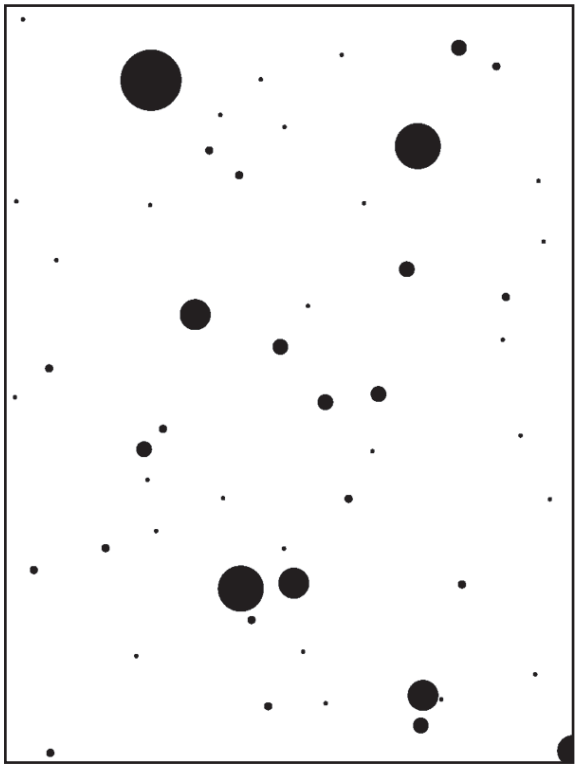


d) Quantity (density) 5 — 5(S4)

Figure A.3 — Blisters of size 4



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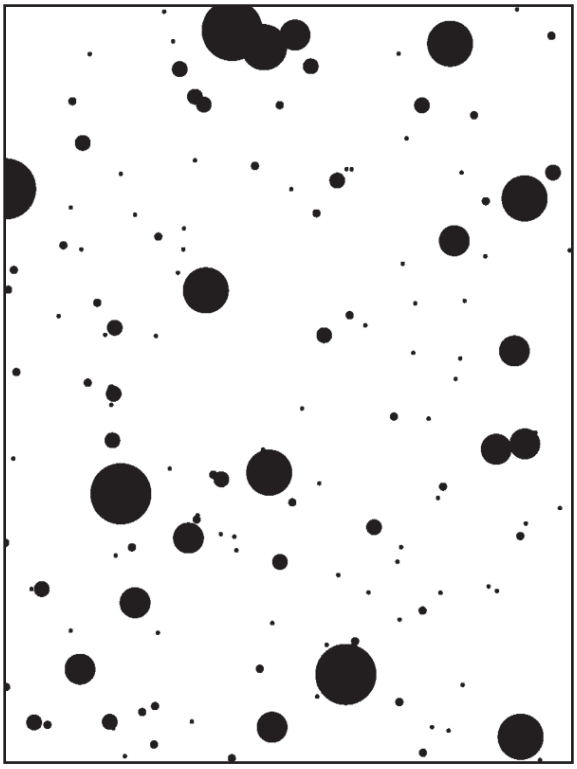

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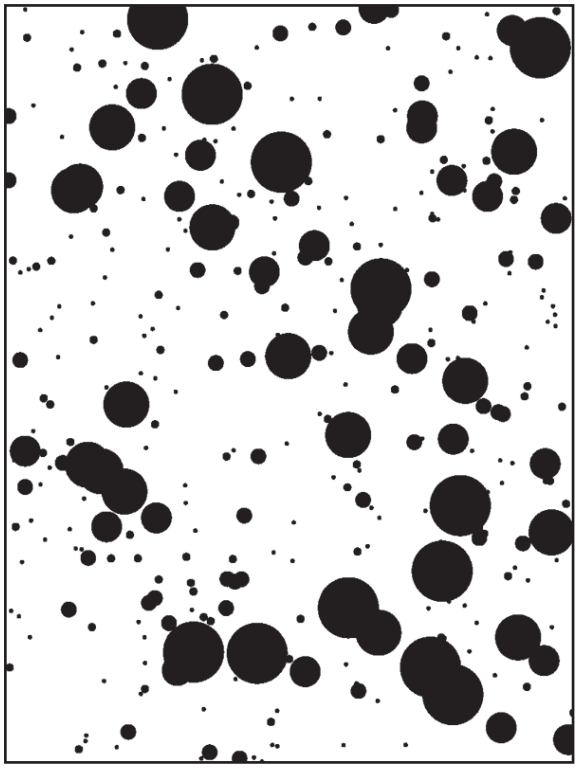

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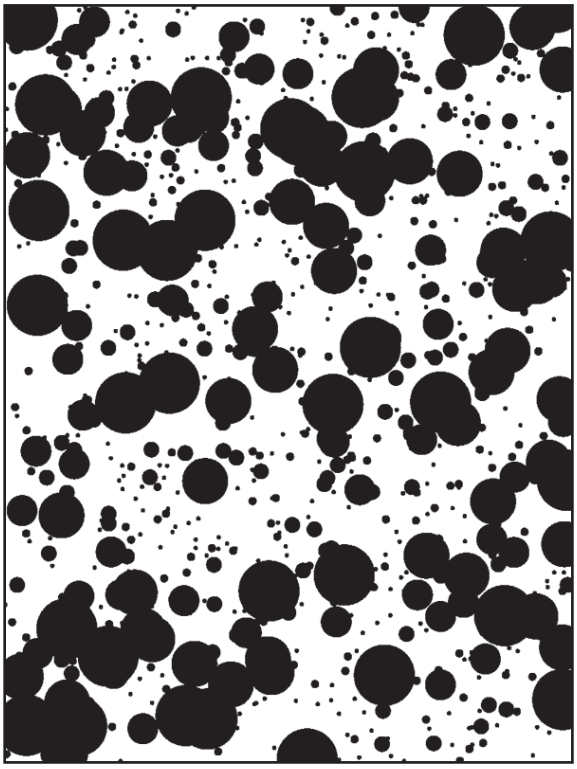

d) Quantity (density) 5 — 5(S5)

Figure A.4 — Blisters of size 5

Annex B
(informative)

Correlation between ISO 4628-2 and ASTM D 714 rating systems

Quantity (density)		Size	
ASTM	**ISO**	**ASTM**	**ISO**
None	0		
—	1	—	1
Few	2	8	2
Medium	3	6	3
Medium-dense	4	4	4
Dense	5	2	5

Bibliography

[1] ISO 4628-1, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 1: General introduction and designation system*

[2] ASTM D714, *Standard Test Method for Evaluating Degree of Blistering of Paints*

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