Government of Canada
Gouvernement du Canada

Canadian General Standards Board
Office des normes générales du Canada

Series 12 / Série 12

ICS 81.040.20

WITHDRAWAL

November 2021

Selected standards in the Glass series

These CGSB standards are hereby withdrawn due to limited use and support for their revision.

The Standards Council of Canada requires that accredited Standards Development Organizations, such as the CGSB, regularly review a consensus Standard to determine whether to reapprove, revise or withdraw. The review cycle is normally five years from the publication date of the latest edition of the Standard. CGSB retains the right to develop new editions at a future date.

The information contained in the standards were originally developed pursuant to a voluntary standards development initiative of CGSB. The information contained therein may no longer represent the most current, reliable, and/or available information on this subject. CGSB hereby disclaims any and all claims, representation or warranty of scientific validity, or technical accuracy implied or express respecting the information therein contained. CGSB shall not take responsibility nor be held liable for any errors, omissions, inaccuracies or any other liabilities that may arise from the provision or subsequent use of such information. These standards are to be referred to for archival purposes as the content has been repealed as of the date on this withdrawal notice.

RETRAIT

Novembre 2021

Sélection de normes de la série Verre

Cette norme de l'ONGC est, par le présent avis, retirée en raison de son utilisation limitée et du manque de support pour sa révision.

Le Conseil canadien des normes exige que les organismes accrédités d'élaboration de normes, tel que l'ONGC, effectuent régulièrement un examen des normes consensuelles afin de déterminer s'il y a lieu d'en renouveler l'approbation, de les réviser ou de les retirer. Le cycle d'examen d'une norme est généralement de cinq ans à partir de la date de publication de la dernière édition de celle-ci. L'ONGC se réserve le droit d'élaborer de nouvelles éditions à une date ultérieure.

L'information contenue dans ces normes a été élaborée initialement en vertu d'une initiative volontaire d'élaboration de normes de l'ONGC. Elle peut ne plus représenter l'information disponible et/ou l'information la plus actuelle ou la plus fiable à ce sujet. L'ONGC décline par la présente toute responsabilité à l'égard de toute affirmation, déclaration ou garantie de validité scientifique ou d'exactitude technique implicite ou explicite relative à l'information contenue dans ces normes. L'ONGC n'assumera aucune responsabilité et ne sera pas tenu responsable quant à toute erreur, omission, inexactitude ou autre conséquence pouvant découler de la fourniture ou de l'utilisation subséquente de cette information. Ces normes doivent être consultées à des fins archivistiques seulement puisque leur contenu a été révoqué à la date du présent avis de retrait.

Copies of withdrawn standards are available from the CGSB Sales Centre by telephone at 1-800-665-2472, by Internet at www.tpsgc- pwgsc.gc.ca/ongc-cgsb/index-eng.html, by e-mail at ncr.CGSB-ONGC@tpsgc-pwgsc.gc.ca or by mail at Sales Centre, Canadian General Standards Board, 140 O'Connor Street, L'Esplanade Laurier Building, Tower East, 6th Floor, Ottawa (Ontario) Canada K1A 0S5.

Des copies des normes retirées peuvent être obtenues auprès du Centre des ventes de l'ONGC. Il suffit d'en faire la demande par téléphone au 1-800-665-2472, par Internet, à www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-fra.html, par courriel, à ncr.CGSB-ONGC@tpsgc-pwgsc.gc.ca, ou par courrier adressé au Centre des ventes, Office des normes générales du Canada, 140, rue O'Connor, Édifice L'Esplanade Laurier, Tour Est, 6e étage, Ottawa (Ontario) Canada K1A 0S5.

CAN/CGSB-12.2-M91
Reaffirmed January 2017
Flat, Clear Sheet Glass

CAN/CGSB-12.2-M91
Confirmée Janvier 2017
Verre à vitres plat et clair

CAN/CGSB-12.3
Reaffirmed January 2017
Flat, clear float glass

CAN/CGSB-12.3
Confirmée Janvier 2017
Verre flotté, plat et clair

CAN/CGSB-12.4
Reaffirmed January 2017
Heat absorbing glass

CAN/CGSB-12.4
Confirmée Janvier 2017
Verre athermane

Government of Canada | Gouvernement du Canada

Canadian General Standards Board | Office des normes générales du Canada

CAN/CGSB-12.3-M91

Supersedes CAN/CGSB-12.3-M76

Reaffirmed
January 2017

National Standard of Canada

Flat, clear float glass

Withdrawn

Canadian General Standards Board CGSB

Standards Council of Canada
Conseil canadien des normes

Canada

Experience and excellence
Expérience et excellence
CGSB ONGC

The CANADIAN GENERAL STANDARDS BOARD (CGSB), under whose auspices this standard has been developed, is a government agency within Public Services and Procurement Canada. CGSB is engaged in the production of voluntary standards in a wide range of subject areas through the media of standards committees and the consensus process. The standards committees are composed of representatives of relevant interests including producers, consumers and other users, retailers, governments, educational institutions, technical, professional and trade societies, and research and testing organizations. Any given standard is developed on the consensus of views expressed by such representatives.

CGSB has been accredited by the Standards Council of Canada as a national standards-development organization. The standards that it develops and offers as National Standards of Canada conform to the criteria and procedures established for this purpose by the Standards Council of Canada. In addition to standards it publishes as National Standards of Canada, CGSB produces standards to meet particular needs, in response to requests from a variety of sources in both the public and private sectors. Both CGSB standards and CGSB national standards are developed in conformance with the policies described in the CGSB Policy and Procedures Manual for the Development and Maintenance of Standards.

CGSB standards are subject to review and revision to ensure that they keep abreast of technological progress. CGSB will initiate the review of this standard within five years of the date of publication. Suggestions for their improvement, which are always welcome, should be brought to the notice of the standards committees concerned. Changes to standards are issued either as separate amendment sheets or in new editions of standards.

An up-to-date listing of CGSB standards, including details on latest issues and amendments, and ordering instructions, is found in the CGSB Catalogue at our Web site — www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html along with more information about CGSB products and services.

Although the intended primary application of this standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any applicable regulatory requirements prior to its use. CGSB neither assumes nor accepts any responsibility for any injury or damage that may occur during or as the result of tests, wherever performed.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. CGSB shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

Language
In this Standard, "shall" states a mandatory requirement, "should" expresses a recommendation and "may" is used to express an option or that which is permissible within the limits of this Standard. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

Further information on CGSB and its services and standards may be obtained from:

The Manager
Standards Division
Canadian General Standards Board
Gatineau, Canada
K1A 1G6

A National Standard of Canada is a standard developed by an SCC-accredited Standards Development Organization (SDO), and approved by the Standards Council of Canada (SCC), in accordance with SCC's: *Requirements and Guidance-Accreditation for Standards Development Organizations, and Requirements and Guidance-Approval of National Standards of Canada Designation*. More information on National Standard requirements can be found at www.scc.ca.

An SCC-approved standard reflects the consensus of a number of experts whose collective interests provide, to the greatest practicable extent, a balance of representation of affected stakeholders. National Standards of Canada are intended to make a significant and timely contribution to the Canadian interest.

SCC is a Crown corporation within the portfolio of Industry Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts. Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

Users should always obtain the latest edition of a National Standard of Canada from the standards development organization responsible for its publication, as these documents are subject to periodic review.

The responsibility for approving standards as NSCs rests with:

Standards Council of Canada
55 Metcalfe Street, Suite 600
Ottawa, Ontario K1P 6L5, CANADA

Withdrawn

How to order CGSB Publications:

by telephone	— 819-956-0425 *or* — 1-800-665-2472
by fax	— 819-956-5740
by mail	— CGSB Sales Centre Gatineau, Canada K1A 1G6
in person	— Place du Portage Phase III, 6B1 11 Laurier Street Gatineau, Quebec
by email	— ncr.cgsb-ongc@tpsgc-pwgsc.gc.ca
on the Web	— www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html

NATIONAL STANDARD OF CANADA **CAN/CGSB-12.3-M91**

Supersedes CAN/CGSB-12.3-M76

Reaffirmed
January 2017

Flat, clear float glass

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE.

Withdrawn

ICS 81.040.20

Published April 1991 by the
Canadian General Standards Board
Ottawa, Canada K1A 1G6

© Minister of Supply and Services Canada – 1991

No part of this publication may be reproduced in any form without the prior permission of the publisher.

CAN/CGSB-12.3-M91
Reaffirmed January 2017

CANADIAN GENERAL STANDARDS BOARD

Committee on Glass

(Voting membership at date of reaffirmation)

Chair

Webb, M.	Insulating Glass Manufacturers Alliance (Producer)

General interest category

Flack, J.	Consultant
Steel, K.	Steel Consulting Services
Zaremba, T.	Roetzel & Andress, LPA

Producer category

Botman, R.	Glassopolis Specialty Glass
Fraser, E.	PPG Flat Glass Canada Inc.
Harder, B.	Ferguson Corporation
Liversidge, M.	Precision Glass Services Inc.
Schimmelpenningh, J.	Eastman Chemical Company
Wakefield, R.	Trulite Canada

Regulator category

Chowhan, P.	Health Canada
Hyde-Clarke, S.	National Research Council of Canada

User category

Brook, M.	BVDA Facade Engineering Inc.
Panziera, S.	Thinkform Architecture & Interiors
Redmond, T.	Ontario Building Officials Association
Sharp, G.	Canadian Home Builders' Association
Shelbourn, K.	Canadian Building Envelope Science & Technology

Secretary (non-voting)

Jimenez, J.	Canadian General Standards Board

Withdrawn

Acknowledgment is made for the translation of this National Standard of Canada by the Translation Bureau of Public Services and Procurement Canada.

CAN/CGSB-12.3-M91

Supersedes CAN/CGSB-12.3-M76

Reaffirmed
January 2017

Preface to the National Standard of Canada

This National Standard of Canada has been reaffirmed by the CGSB Committee on Glass. Editorial changes have been made by the corrections of the following paragraphs:

8.4.1 The publications referred to in par. 2.1.1 may be obtained from the Canadian General Standards Board, Sales Centre, Gatineau, Canada K1A 1G6. Telephone 819-956-0425 or 1-800-665-2472. Fax 819-956-5740. Web site www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html.

8.4.3 The publication referred to in par. 2.1.3 may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, U.S.A., telephone 610-832-9585, fax 610-832-9555, or from IHS Markit, 200-1331 MacLeod Trail SE, Calgary, Alberta T2G 0K3, telephone 613-237-4250 or 1-800-267-8220, fax 613-237-4251, Web site www.global.ihs.com.

Withdrawn

CAN/CGSB-12.3-M91

Supersedes
CAN/CGSB-12.3-M76
Reaffirmed January 2017

CANADIAN GENERAL STANDARDS BOARD

FLAT, CLEAR FLOAT GLASS

Withdrawn

1. SCOPE

1.1 This standard applies to flat, clear glass of the float type produced by floating the glass on a bath of molten metal.

1.2 The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any existing applicable regulatory requirements prior to its use.

2. APPLICABLE PUBLICATIONS

2.1 The following publications are applicable to this standard:

2.1.1 Canadian General Standards Board (CGSB)

CAN/CGSB-12.4-M — Heat Absorbing Glass.

2.1.2 National Research Council of Canada (NRC)

National Building Code of Canada.

2.1.3 ASTM

C 162 — Definition of Terms Relating to Glass and Glass Procedures.

2.2 Reference to the above publications is to the latest issues, unless otherwise specified by the authority applying this standard. The sources for these publications are shown in the Notes section.

3. TERMINOLOGY

3.1 **Glass and Types of Glass**

Glass — Glass is an inorganic product of fusion that has cooled to a rigid condition without crystallizing. Glass is typically hard and brittle, and has a conchoidal fracture. It may be colourless or tinted, and transparent to opaque. Masses or bodies of glass may be tinted, translucent, or opaque by the presence of dissolved, amorphous or crystalline material. Glass that does not contain such added materials is designated as "clear" or transparent.

Plate glass — Glass from which surface irregularities have been removed by grinding and polishing, so that the surfaces are plane (flat) and parallel.

Float glass — Glass that has virtually plane and parallel surfaces formed by floating in a continuous ribbon of glass on the surface of a bath of molten metal in a controlled atmosphere.

3.2 **Central Area of Sheet** — The central area is considered to form an oval or circle centred on the sheet whose axes or diameters do not exceed 80% of the overall dimension. This allows a fairly large area at the corners that may have imperfections not allowed in the central area.

3.3 **Defects in Glass**

Bubbles — Gas inclusions in any glass. These inclusions are almost always brilliant in appearance. The term is applied to all such inclusions larger than 1.0 mm in maximum dimension. The term "small bubbles" refers to size between 1.0 and 2.5 mm (see Seeds).

Cords (see Ream) — Heavy strings incorporated in the sheet rather than on the surface, occurring without any regularity of direction and appearing to be of considerable thickness.

Crush — A lightly pitted area resulting in a dull gray appearance over the region.

Digs — Deep, short scratches.

Dirt — A small particle of foreign matter imbedded in the glass surface.

Finish — See Process Surface Defects.

Fire Cracks — Small cracks penetrating the surface of the glass usually in the shape of short hooked crescents.

Gaseous Inclusions — Round or elongated bubbles in the glass.

Heavy Seeds — A condition in which the fine and coarse seeds are very numerous, such as four or more to the square centimetre.

Knot — A transparent area of incompletely assimilated glass having an irregular knotty or tangled appearance.

Lines — Fine cords or strings, usually on the surface of sheet glass. Waves that extend continuously across the sheet, so that the reflection from the surface appears as a line or series of lines extending either the full width or a considerable distance across the sheet.

Open Gaseous Inclusions — Bubbles at the surface of glass that are open, leaving a cavity in the finished surface.

Process Surface Defects — Very fine surface defects remaining on the surfaces of plate glass form the grinding and polishing process, consisting of fine pits and cracks that are denoted as "finish"; when this condition is visible, it is called "short finish." Slight surface defects that originate in the process; these can be small particles of foreign materials on either surface or slight defects in the bottom (float) surface.

Ream (see Cords) — Inclusions within the glass, or layers or strings of glass, that are not homogeneous with the main body of the glass.

Rubs — Abrasion of the glass surfaces producing a frosted appearance. A rub differs from a scratch in having appreciable width.

Sand Holes — Rough spots on the polished surface, produced during coarse grinding, that fine grinding did not remove later owing, to some extent, to coarse grains of grinding sand becoming mixed with finer grades.

Scratches — Any marking or tearing of the surface appearing as though it had been done by either a sharp or rough instrument. Scratches occur on glass in all degrees from various accidental causes. Block reek is a chain-like scratch produced in polishing. A runner-cut is a curved scratch caused by grinding. A sleek is a hairline scratch. A crush or rub is a surface scratch or series of small scratches generally caused by handling.

Seeds — Minute bubbles less than 1.0 mm diameter. Fine seeds are visible only upon close inspection, usually appearing as small specks, and are an inherent defect in the best quality of plate glass. Seeds about 1.0 mm in diameter are usually considered coarse seeds.

Short Finish (see Process Surface Defects) — Insufficient polish or lack of brilliancy; improperly finished surface that has the appearance of being slightly pitted and wavy when the surface is viewed in reflected light. These indentations, which are slight, have a polished rather than a ground surface, but the general effect is a slight dulling of the surface. Poor polish is usually caused by improper grinding.

Skim — Streaks of dense seed with accompanying small bubbles.

Sleek — A fine scratchlike mark having smooth boundaries, usually produced by a foreign particle in the polishing operation.

Stones — Any opaque or partially melted particle of rock, clay or batch ingredient embedded in the glass.

Strings (see Ream) — Wavy, transparent lines appearing as though a thread of glass had been incorporated into the sheet.

Wave — Defects resulting from irregularities of the surfaces of glass making object viewed at varying angles appear wavy or bent.

3.4 Additional definitions of terms relating to glass and glass products may be found in ASTM C 162.

Withdrawn

4. CLASSIFICATION

4.1 The float glass shall be supplied in the following qualities, as specified (par. 8.1):

4.1.1 *Qualities*

Silvering

Mirror Glazing (Selected Glazing)

Glazing.

5. DETAILED REQUIREMENTS

5.1 **Dimensions** — The clear float glass shall be supplied in the dimensions specified (par. 8.1) within the tolerances for thickness, length and width stated in Table 1.

5.2 **Squareness** — The corners of any rectangular piece of float glass shall not deviate from a right angle by an amount greater than that represented by 0.075 or 1.3 mm/m.

5.3 **Light Transmittance** — The clear float glass shall have nominal percentages of light transmittance (within a tolerance of ± 5%) according to thickness given in Table 1, when tested in accordance with the procedure stated in CAN/CGSB-12.4-M.

TABLE 1

Nominal Thickness mm	Thickness Tolerance mm	Length and Width Tolerance of Cut Sizes mm	Light Transmittance Nominal %
2	± 0.5	± 2.0	90
3	± 0.5	± 2.0	90
4	± 0.5	± 2.0	90
5	± 0.5	± 2.0	89
6	± 0.5	± 2.0	88
8	± 0.8	± 2.5	87
10	± 1.0	± 2.5	87
12	± 1.0	± 3.0	85
15	± 1.0	± 4.0	85
19	± 1.0	± 5.0	82
22	± 1.0	± 6.0	81
25	± 1.0	± 6.5	79

5.4 **Maximum Glass Sizes for Doors and Windows** — Maximum glass sizes according to thickness for glazing doors or windows shall conform to the requirements of the National Building Code of Canada.

5.5 **Defects in Float Glass (par. 8.2)** — Defects shall not be greater than those listed in Tables 2 and 3 for glass thicknesses 6 mm or less (par. 6.2 and 3.3). Glass of greater thickness than 6 mm may contain proportionately more and larger defects than 6 mm "Glazing Quality" glass of the same sizes as specified in Table 3. Glass over 6 mm in nominal thickness shall be furnished in "Glazing Quality"only.

Withdrawn

TABLE 2

Defects	Silvering Quality up to 2.5 m²		Mirror Glazing Quality up to 2.5 m²		Mirror Glazing Quality over 2.5 m²	
	Central [d]	Outer [d]	Central [d]	Outer [d]	Central [d]	Outer [d]
Gaseous inclusions [f]	0.5 mm [a,g]	1.0 mm [a,g]	1.0 mm [a,g]	1.0 mm [a,g]	1.0 mm [a,g]	1.5 mm [a,g]
Open gaseous inclusions [f]	None	0.5 mm [b,g]	None	0.5 mm [a,g]	0.5 mm [a,g]	1.0 mm [a,g]
Stones and knots	None	None	None	0.5 mm [b]	0.5 mm [b]	1.0 mm [b]
Scratches and rubs	Faint [e] 150 mm	Light [e] 150 mm	Faint [e] 150 mm	Light [e] 150 mm	Light [e] 150 mm	Medium [e] 150 mm
Crush	None	None	None	None	Light [e][b] 0.5 mm	Medium [e][a] 1.0 mm
Digs	None	None	None	None	0.5 mm [b]	1.0 mm [b]
Process surface defects	Faint [h]	Light [h]	Faint [h]	Light [h]	Light [h]	Medium [h]
Ream, strings and wave	Not visible 30° [c]		Not visible 30° [c]		Not visible 30° [c]	

TABLE 3

Defects	Glazing Quality up to 2.5 m²		Glazing Quality over 2.5 to 7 m²		Glazing Quality over 7.0 m²	
	Central [d]	Outer [d]	Central [d]	Outer [d]	Central [d]	Outer [d]
Gaseous inclusions [f]	1.5 mm [a,g]	2.5 mm [a,g]	3.0 mm [a,g]	5.0 mm [a,g]	6.5 mm [a,g]	6.5 mm [a,g]
Open gaseous inclusions [f]	1.0 mm [a,g]	1.5 mm [a,g]	1.0 mm [a,g]	1.5 mm [a,g]	6.5 mm [a,g]	6.5 mm [a,g]
Stones and knots	0.5 mm [a]	1.0 mm [a]	1.5 mm [a]	1.5 mm [a]	3.0 mm [a]	3.0 mm [a]
Scratches and rubs	Medium [e]	Medium [e]	Medium [e]	Heavy [e]	Heavy [e]	Heavy [e]
Crush	Medium [e][b] 1.5 mm	Medium [e][b] 2.5 mm	Medium [e][b] 3.0 mm	Heavy [e][a] 5.0 mm	Heavy [e][b] 6.5 mm	Heavy [e][a] 6.5 mm
Digs	1.5 mm [b]	2.5 mm [b]	3.0 mm [a]	5.0 mm [a]	6.5 mm [a]	6.5 mm [a]
Process surface defects	Medium [h]	Medium [h]	Medium [h]	Heavy [h]	Heavy [h]	Heavy [h]
Ream, strings and wave	Not visible 45° [c]		Not visible 90° [c]		Not visible 90° [c]	

Withdrawn

Notes to Tables 2 and 3

(a) Separated by at least 300 mm.

(b) Separated by at least 600 mm.

(c) Vision interference angle (par. 6.2.3).

(d) The central area is considered to form an oval or circle centred on the glass whose axes or diameters do not exceed 80% of the overall dimension. The remaining area is considered the outer area.

(e) **Intensity** *(Scratches, Rubs and Crush) — When looking through glass and perpendicular to it, using daylight without direct sunlight or with background light suitable for observing each type of defect, the defects shall not be detectable when viewed at the following distances (par. 6.2.2), except for heavy intensity.*

Intensity	*Distance*
Faint	200 mm
Light	1000 mm
Medium	3000 mm
Heavy	3000 mm

(f) Gaseous inclusions may be round or elongated. For elongated inclusions the maximum size specified shall be determined by adding the length and width of the inclusion and dividing by two (L + W)/2.

(g) For defects of small size or of less intensity, the minimum separation shall be proportionately less. The larger of two defects shall govern the separation. Defects not specifically mentioned shall be compared to the defect they most closely resemble.

(h) **Intensity** *(Process Surface Defects) — When viewed in normal light, the defects are classified as follows: Faint — visible only to the trained eye. Light — just noticeable. Medium — visible as a slight grayish haze. Heavy — readily visible as a cloudy surface.*

6. INSPECTION

6.1 **Sampling** — Sampling of the glass for inspection shall be left to the discretion of the inspection authority, unless a specific sampling plan is specified (par. 8.1).

6.2 **Examination for Defects**

6.2.1 ***Gaseous Inclusions, Stones, Knots, Digs, and Process Surface Defects*** — Place a sample in a vertical position approximately 1000 mm from the viewer's position. The viewer shall look through the sample using either daylight without direct sunlight or a background light suitable for observing each type of defect.

6.2.2 ***Scratches, Rubs and Crush*** — Examine as in par. 6.2.1 except that distance of viewer from sample shall be as specified in Table 2 or 3 Note (e) for the applicable quality and size of glass sample.

6.2.3 ***Ream, Strings and Wave*** — Place sample in a vertical position at a distance of approximately 1000 mm from a brick wall or similar background showing essentially straight parallel lines. The viewer shall look through the sample from a distance of approximately 1000 mm using either daylight without direct sunlight, or a background light suitable for observing each type of defect. View the sample at an angle to the surface of not less than the vision interference angle specified in Table 2 or 3 for the applicable glass. Line of vision shall be perpendicular to wall. Slight movement of the head horizontally through an angle of two to three degrees will make waves or lines more perceptible.

7. PREPARATION FOR DELIVERY

7.1 **Labelling** — When specified (par. 8.1) each individual piece of float glass shall bear a label, affixed by the manufacturer, giving the manufacturer's name or trademark, the quality of glass, nominal thickness, and country of manufacture. Otherwise, this information shall be clearly stated on each package of float glass.

7.2 **Packaging, Packing and Marking** — Packaging, packing and marking of float glass shall be in accordance with normal commercial practice.

8. NOTES

8.1 **Options** — The following options must be specified in the application of this standard:

a. Quality of float glass (par. 4.1 and 8.3)

b. Sheet dimensions (par. 5.1)

c. Nominal thickness (Table 1)

d. Sampling, if a specific plan is required (par. 6.1)

Withdrawn

e. Labelling requirements (par. 7.1).

8.2 All flat glass contains some imperfections and the principle employed in grading is to exclude all defects that would be objectionable in a given quality. This is difficult to do since there are no sharp lines of demarcation between qualities, and experienced inspectors will differ in judgment as the quality of the glass approaches the limits of the grades.

8.3 **Silvering, Mirror (Selected) Glazing, and Glazing Qualities** — Silvering quality is the highest quality float glass sold. It is seldom required for glazing purposes. Mirror glazing (Selected glazing) quality is used where a very high standard of glazing is required and imperfections are discoverable only upon close inspection. This quality is rarely sold for glazing purposes in sizes over 2.5 m^2. The glazing quality represents the usual selection of float glass supplied when quality is not otherwise definitely specified (par. 8.1).

8.4 **Sources of Referenced Publications**

8.4.1 The publication referred to in par. 2.1.1 may be obtained from the Canadian General Standards Board, Sales Unit, Ottawa, Canada K1A 1G6. Telephone (819) 956-0425 or 956-4026. Fax (819) 956-5644.

8.4.2 The publication referred to in par. 2.1.2 may be obtained from the Secretary, Associate Committee on the National Building Code of Canada, National Research Council of Canada, Montreal Road, Ottawa, Ontario K1A 0R6.

8.4.3 The publication referred to in par. 2.1.3 may be obtained from ASTM, 1916 Race Street, Philadelphia, PA 19103, U.S.A. or from the Standards Council of Canada, Standards Sales Branch, 350 Sparks Street, Suite 1200, Ottawa, Ontario K1P 6N7.

Withdrawn