



2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONework (MG
C1)

1. General quality of materials and workmanship.
2. Tolerances in manufacturing process.
3. Tolerances in installation process.
4. Handling and storage.
5. Appendix - Stone Proportion Index
6. Appendix - Standard Drawings.

- 1985 Monier Granite
1995 Revised - Master Monumental Masons & Sculptors
Association of South Australia
2001 Revised - Stone Forum
2004 Revised - Stone Industry SA Standards Board
2006 Revised - Stone Industry SA Standards Board
2008 Revised - Stone Industry SA Standards Board
2010 Revised – Stone Industry SA Standards Board
2012 Revised – Stone Industry SA Standards Board
2015 Revised - Stone Industry SA Standards Board

Note: The initiator and or agent of this Standard Code does not accept any claim whatsoever, by any party as a result of the use and or misuse of any part of this document.

- 2 -

1. GENERAL QUALITY OF MATERIALS AND WORKMANSHIP

1.1 Stone is a natural building material and, therefore, variations in texture, colour, consistency and molecular structure occur. However as natural stone varies, it is recommended for the client to request viewing of the particular stone to be used.

1.2 Spotting/Colour



STONE STANDARDS

2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONEWORK (MG
C1)

The presence of impurities, flairs, pit marks shall be deemed as being part of the natural stone. Colour variations may occur with particular types of stone that show a lot of texture and patterns. This is to be viewed as a feature of the stone.

1.3 Workmanship

Structurally unsafe stone members shall not be processed and installed in any structure or building.

Processing, handling and installation of natural stone shall be carried out in a professional tradesman-like

manner. Allowances for loads and conditions shall be made in the design stage - eliminating replacement due to failure of a stone member. On bench tops - cabinets and support structures are to allow for sufficient strength to absorb design loads.

Climatic conditions and light can alter a surface finish and change a colour of a particular stone.

This is not a result of poor workmanship.

1.4 Samples

Samples are not absolute guarantee as to colour, texture, and possible impurities and are indicative only of the stone type to be used.

1.5 Generic Terms

Marble, Granite, Sandstone, Limestone etc. are to be



2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONework (MG
C1)

viewed as generic terms and their use characterises a particular family of rocks

2. TOLERANCES IN MANUFACTURING PROCESS

2.1 General

Cracked and obviously unsound stone shall not be processed as a stone member - carrying loads or being subjected to various weathering conditions. All stone shall be cut and surface finished within a prescribed tolerance.

2.2 Tolerances

(A) Wall panels polished, honed, gang-sawn surface finish.

(aa) Tolerances of length and width
0.6 M2 and under

+ or - 1.5 mm

over 0.6 M2

+ or - 2.0 mm

(ab) Panels diagonals

+ or - 4.0 mm

(ac) Flatness, twist of panels

+ or - 1.5 mm

(ad) Note: On exfoliated surfaces

adjustments on

flatness and twist of panels

are

allowed to be made in order

to suit

the general plane of the

finished

surface. These adjustments

have to be

made on the edges.



(B) Floor panels polished, honed gang-sawn, exfoliated surface finish.

(ba) Tolerances in length and width
0.6 M2 and under

+ or - 1.5 mm

over 0.6 M2

+ or - 2.0 mm

(bb) Panels diagonals

+ or - 4.0 mm

(bc) Flatness, twist of panels

+ or - 2.0 mm

(bd) Note: Exfoliated surfaces, flatness

and twist

of panels - same rule applies

as with

wall panels (2.2 (ad)).

2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONEWORK (MG
C1)

(C) Bench Tops

(ca) Tolerances in length and width

+ or - 3.0 mm

(cb) Panels diagonals

+ or - 4.0 mm

(cc) Flatness, twist of panel

+ or - 1.5 mm

(cd) Overhang tolerance - cabinet

+ or - 5.0 mm

(ce) Thickness

+ or - 3.0 mm

(D) Artistically Tooled Stone Members

Hammered and nipped surface finish

- 4 -

(da) Tolerances of length and width

+ or - 4.0 mm

(db) Diagonals

+ or - 5.0 mm

2.3 Impurities

oxide On gang-sawn and exfoliated surfaces - iron

particles causing oxidation (rust) shall be washed out using appropriate solutions for stone, appropriate to the particular stone type.



2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONework (MG
C1)

2.4 Recommended Thickness of Stone Members

- (a) Wall panels
30 mm
- (b) Floor panels
20 - 30 mm
- (c) Wall panels - exfoliated
40 mm
- (d) Bench Tops
20 - 30 mm
- (e) Note: Variations in thickness does occur due to cutting and tooling methods used.

2.5 Surface Finishes

- (a) Gang-sawn finish.
- (b) Exfoliated finish - the surface shall be flame spalled deep enough to remove cutting marks.
- (c) Glass beaded finish.
- (d) Honed finish
- (e) Polished finish - stone shall be finished to a natural gloss within a tolerance of plus or minus 15 Gloss Units [GU] from the mean average gloss measured on the panel.
- (f) Hammered finish - uniform bush hammered finish.
- (g) Diamond Wire sawn.
- (h) Block sawn.
- (i) Brushed
- (j) Water Jet Finish

3. TOLERANCES IN INSTALLATION PROCESS

3.1 General

All stonework shall be installed according to the general trade practice for stonemasons, by competent tradesmen.

3.2 Technique

Variations of installation techniques warrant a deviation of tolerances applicable in individual circumstances.



**STONE
STANDARDS**

2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONEWORK (MG
C1)

3.3 Tolerances - Granite/Marble/Sandstone /
Reconstituted Quartz

| | | |
|---------|------------------------------------|------|
| | (A) <u>Wall Panels</u> | |
| nominal | (aa) Standard joint width | 5 mm |
| | (Page 8 detail) | |
| | (ab) Maximum stepping across joint | |
| | 1.2 M2 and under | |
| | + or - 2.0 mm | |
| | Over 1.2 M2 | |
| | + or - 2.5 mm | |

| | | |
|---------|------------------------------------|------|
| | (B) <u>Floor Paving</u> | |
| nominal | (ba) Standard joint width | 3 mm |
| | (Page 8 detail) | |
| | (bb) Maximum stepping across joint | |
| | 0.6 M2 and under | |
| | + or - 1.5 mm | |
| | Over 0.6 M2 | |
| | + or - 2.0 mm | |

| | | |
|---------|------------------------------------|------|
| | 3.4 (A) <u>Bench Tops</u> | |
| nominal | (aa) Standard joint width | 2 mm |
| | (Page 8 detail) | |
| | (ab) Maximum stepping across joint | |
| | 0.6 M2 and under | |
| | + or - 0.5 mm | |
| | Over 0.6 M2 | |
| | + or - 0.75 mm | |

Note: At no time and or
circumstance should a
stone panel be installed
against a adjacent
stone panel without a
minimum gap of at
least 1 mm.

(ac) Joint width against other building
elements.



2015 EDITION

**STANDARD CODE
FOR GRANITE AND
MARBLE
STONework (MG
C1)**

Bench Tops 4.0 mm nominal
 Wall panels / Cabinets 4.0 mm nominal
 Note: Irregularities in walls - Panels are to be cut in straight lines, measured to the mean rectangular and or parallel line.
 (ad) Variation in thickness of stone + or - 3.0 mm

(B) Bench Tops
 (ba) Non visible surfaces and underside of bench tops are
 sawn - as standard.
 (bb) Standard lamination width is 100 mm max.. Wider then 100 mm is regarded as Non - Standard.
 (bc) Patching of edges caused by cutting and grinding is allowable. This applies also to joint locations where two panels are glued together.

- 6 -

(bd) Under slang bowls shall have a minimum stone overhang of 1 mm, up to 10 mm from the edge of the bowl.
 (be) Drainer board depth tolerances + or - 2.0 mm
 (bf) Sink installation - No screw clips to be used. The installation is to be carried out by a licensed plumber.
 (bg) Kitchen Designers / Cabinet Makers are to allow for sufficient strength of cabinets and or shelf supports. Bench Tops spanning over a void – as in a dishwasher section – requires a support under the stone in the front and back of the void.
 (bh) Front edge skirting should avoid cutting angles of 45 deg. or less. Preference should be given to butt up to the underside of the bench top panel.
 (bi) End panels should not be cut to 45 deg. or less, to form corner details.



2015 EDITION

STANDARD CODE
FOR GRANITE AND
MARBLE
STONework (MG
C1)

Preference should be given to butt up to the underside of the bench top

when the end panel is supported by

panel. This detail should be applied

a concrete floor, or a timber floor.

(bj) The maximum un supported overhang on Quartz Bench Tops is 200mm. This applies to 20 mm and 30 mm thick stone.

(bk) The maximum un supported overhang on Granite and Marble Bench Tops is 300 mm on 30mm thick stone and 250 mm on 20 mm thick stone.

(bl) Quartz Bench Top cut outs require a 150 mm minimum clearance from a panel joint and or panel end. The front and back strip section of such a cut out needs to be a minimum of 70 mm wide.

(bm) On Quartz Bench Tops, L shapes are not allowed.
On Granite Bench Tops, L shapes in general are not allowed, but can be made at the discretion of the stone mason.

3.5 Fixings

and
factors
is given
failure of

All fixing materials shall be of good quality strong enough to support load and stress which are of common nature. No guarantee whenever structural movements cause the stone and fixing.

3.6 Cleaning

of
shall be

All stonework shall be cleaned after installation with non-destructive, preferably PH neutral cleaning agents. On marble, trachite, sandstone and porphyric stone, none of the acids or acid forming cleaning agents shall be used.

Sealing of stone is at the discretion of the supplier.



**STONE
STANDARDS**

2015 EDITION

**STANDARD CODE
FOR GRANITE AND
MARBLE
STONEMWORK (MG
C1)**

**3.7 Clearance of Veneer, Tops or Paving to
Supporting Structure**

-7 -

(A) Wall panels to structure - veneer 20 mm
nominal

(B) Floor panels to structure
Allowance for mortar bed
20 mm nominal

(C) Stone Tiles/Panels to
structure
4 mm nominal

(D) Counter panels to
structure
0 - 5 mm nominal
(Depending on supporting structure)

**3.8 Structural joints - Flooring / Walling / Bench
Tops**

Structural joints, as defined, are placed to
eliminate cracking
of the stone panel due to structural, thermal
and or design
load principles. Typical locations of such
joints are sink and oven locations as well as
corner sections on bench tops. Placement of
joints are at the discretion of the stone
mason.

3.9 Compounding Tolerances

A compounding of a manufacturing
tolerance into the
installation tolerance whenever occurring,
shall be adjusted
to split the compounded tolerance at the joint
junction into
half and half. This applies only if the
tolerance compounds
over the plane of a panel.



2015 EDITION

**STANDARD CODE
FOR GRANITE AND
MARBLE
STONEWORK (MG
C1)**

4. HANDLING AND STORAGE

4.1 At the construction site or storage yard, the granite or marble shall be stacked on timber or platform at least 100 mm of the ground. If a multiple stacking of panels is to be performed - care shall be taken in positioning timber bearers, in line with the preceding one. To prevent staining, plastic material shall be placed between timber and finished stone surface. Thin and oversize stone panels shall be stored in a semi - vertical position.

4.2 During handling and storage, care shall be taken to protect corners and sharp edges from damage.

5. APPENDIX - STONE PROPORTION INDEX

(A) Veneer Claddings Walls

| | | | |
|-------|-------------------------|----------------|------|
| fixed | 10 mm thick | 400 x 400 mm | Glue |
| fixed | 20 mm thick | 1200 x 1200 mm | Glue |
| | 30 mm thick | 1800 x 900 mm | |
| | Mechanical anchor fixed | | |

-8-

| | | | |
|--|-------------------------|----------------|--|
| | 40 mm thick | 1800 x 1000 mm | |
| | Mechanical anchor fixed | | |

(B) Floor Paving

| | | | |
|---------------------|-------------|---------------|--------|
| fixed | 10 mm thick | 400 x 400 mm | Glue |
| fixed, Mortar fixed | 20 mm thick | 600 x 600 mm | Glue |
| fixed | 30 mm thick | 800 x 500 mm | Mortar |
| fixed | 40 mm thick | 1000 x 600 mm | Mortar |



2015 EDITION

**STANDARD CODE
FOR GRANITE AND
MARBLE
STONEWORK (MG
C1)**

(C) Bench Tops

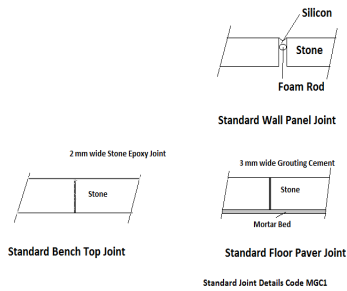
| | | | |
|-------|-------------|----------------|---------|
| fixed | 20 mm thick | 1500 x 600 mm | Silicon |
| fixed | 30 mm thick | 2500 x 1000 mm | Silicon |
| fixed | 40 mm thick | 2800 x 1000 mm | Silicon |

(D) Wall Blocks

| | | | |
|-------|--------------|--------------|--------|
| fixed | 100 mm thick | 600 x 400 mm | Mortar |
|-------|--------------|--------------|--------|

Note: The above index shows relative proportions to general principles. Engineering advice shall be taken, to apply to a particular requirement.

Notes:



- 9

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