



Maxxon Canada  
609 Yarmouth Dr.  
Waterloo, ON N2K 4C1  
Toll-free Phone: 800-356-7887  
Phone: 519-746-9300  
Fax: 519-746-1276  
Web site: [www.maxxon.ca](http://www.maxxon.ca)  
Email: [info@maxxon.ca](mailto:info@maxxon.ca)

Produced by Reed Construction Data, this Buildcore 3-part Specification utilizes Construction Specifications Canada's (CSC) Manual of Practice (MoP), including MasterFormat™, SectionFormat™ and PageFormat™. Each publication is available from CSC. A Buildcore 3-part Specification is a manufacturer-specific product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets, [ ]. SPEC NOTES precede specification text. Trade/brand names with appropriate product model numbers, styles and types are used in SPEC NOTES and in the specification text Article titled "Acceptable Material." Metric conversion, where used, is soft metric conversion. This Buildcore 3-part Specification specifies gypsum cement flooring underlayment, as manufactured by Maxxon Corporation. Revise Buildcore 3-part Specification Section number and title below to suit project requirements, specification practices and section content. Refer to CSI/CSC MasterFormat for other Section numbers and titles. Delete unused optional text and SPEC NOTES in final copy of specification in accordance with CSC recommended specification writing practice.

1 General

1.1 SUMMARY

- .1 Section includes: This Section specifies gypsum cement flooring underlayment and its application.

1.2 RELATED SECTIONS

SPEC NOTE: Include in this Article only those sections that directly affect the work of this Section. Do not include Division 00 or Division 01 sections since it is assumed that all technical sections are related to all project Division 00 and Division 01 sections to some degree.

- .1 Section [09 80 00 - Acoustic Treatment: Acoustical sound mats] [\_\_\_\_\_].

SPEC NOTE: Article below may be omitted when specifying Maxxon Corporation's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this Section. Indicate issuing authority name, acronym, standard designation and title. Section 01 42 19 - Reference Standards may include the full names and addresses of the organizations whose standards are referenced in a project. The Section can also be used for the editions or dates of referenced standards not otherwise indicated. Edit the following lists and delete standards not required for the specific project.

1.3 REFERENCES

- .1 ASTM International (ASTM)

- .1 ASTM C 472-99 (2004), Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete.



.2 ASTM E 84-07, Standard Test Method for Surface Burning Characteristics of Building Materials.

.3 ASTM F 710-05, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

.2 Buildcore, Reed Construction Data

.1 Buildcore Datasheet, Section 03 54 13 – Gypsum Cement Underlayment.

.3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

#### 1.4 ACTION SUBMITTALS

.1 General: Submit listed action submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures] [\_\_\_\_\_].

.2 Product data: Submit product data, including [Maxxon Corporation's Buildcore Datasheet, Section 03 54 13 – Gypsum Underlayment] [manufacturer's product sheet] for specified products. Include:

.1 Product characteristics.

.2 Performance criteria.

.3 Limitations.

.4 WHMIS - Material Safety Data Sheets indicating VOC.

.3 Samples: Submit as follows.

.1 [Duplicate] [305 mm (12") x 305 mm (12")] [\_\_\_\_\_ mm (\_\_\_\_\_) x \_\_\_\_\_ mm (\_\_\_\_\_)], 19 mm (0.75") thick samples of specified underlayment applied to 19 mm (0.75") thick plywood.

#### 1.5 INFORMATION SUBMITTALS

.1 Quality assurance:

.1 Test reports: Certified test reports showing compliance with specified performance characteristics and physical properties.

.2 Certificates: Product certificates signed by [Maxxon Corporation] [manufacturer] certifying materials comply with specified performance characteristics and criteria and physical requirements.

.3 Manufacturer's instructions: [Maxxon Corporation's] [Manufacturer's] installation instructions.

SPEC NOTE: Co-ordinate article below with Part 3 - Field Quality Requirements Article. Retain or delete as applicable.

.4 Manufacturer's field reports: [Maxxon Corporation's] [Manufacturer's] field reports specified.

#### 1.6 CLOSEOUT SUBMITTALS

.1 Warranty: Submit warranty documents specified.

#### 1.7 QUALITY ASSURANCE

SPEC NOTE: Article below should list obligations for compliance with specific code requirements particular to this Section. General statements to comply with a particular code are typically addressed in Contract Conditions and Section 01 41 00 - Regulatory Requirements. Repetitive statements should be avoided. Current data on building code requirements and product compliance may be obtained from Maxxon Corporation technical support specialists.

.1 Regulatory requirements: In accordance with Section [01 41 00 - Regulatory Requirements] [\_\_\_\_\_].

.2 Pre-installation meetings: Conduct pre-installation meeting to verify project requirements, [Maxxon Corporation's] [manufacturer's] installation instructions and [Maxxon Corporation's] [manufacturer's] warranty requirements. Comply with [Section 01 31 19 - Project Meetings] [\_\_\_\_\_].

#### 1.8 DELIVERY, STORAGE AND HANDLING

.1 General: Comply with [01 61 00 - Common Product Requirements] [\_\_\_\_\_].

.2 Ordering: Comply with [Maxxon Corporation's] [manufacturer's] ordering instructions and lead time requirements to avoid construction delays.

.3 Delivery: Deliver materials in [Maxxon Corporation's] [manufacturer's] original packaging with identification labels intact and in sizes to suit project.

.4 Storage and protection: Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by [Maxxon Corporation] [manufacturer].

.5 Ensure materials are stored without direct contact to ground.

.6 Remove damaged or deteriorated materials from site prior to start of work.

.7 Waste management and disposal:

SPEC NOTE: The disposal of packaging waste into landfill site demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for LEED™ construction project certification.

.1 Separate waste materials for [reuse] [and] [recycling] [\_\_\_\_\_] in accordance with [Section 01 74 19 - Construction Waste Management and Disposal] [\_\_\_\_\_].

.2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

- .3 Collect and separate for disposal [paper] [plastic] [polystyrene] [corrugated cardboard] [\_\_\_\_\_] packaging material [in appropriate on-site bins] [\_\_\_\_\_] for recycling.

## 1.9 SEQUENCING

- .1 Sequence with other work: Comply with [Maxxon Corporation's] [gypsum cement underlayment manufacturer's] written recommendations for sequencing construction operations.

SPEC NOTE: Co-ordinate Article below with the Contract Conditions and with Section 01 78 36 - Warranties.

## 1.10 WARRANTY

- .1 Project warranty: Refer to Contract Conditions and Section [01 78 36 - Warranties] [\_\_\_\_\_] for project warranty provisions.
- .2 Manufacturer's warranty: Submit, for Owner's acceptance, [Maxxon Corporation's] [manufacturer's] standard warranty document executed by authorized company official. [Maxxon Corporation's] [Manufacturer's] warranty is in addition to and not intended to limit other rights Owner may have under Contract Conditions.

SPEC NOTE: Co-ordinate Article below with Maxxon Corporation warranty requirements.

- .3 Warranty period: [One year] [\_\_\_\_\_] , commencing on Date of Substantial Performance of Work.

## 2 Products

### 2.1 MANUFACTURERS

- .1 Ensure manufacturer has minimum [five] years experience in manufacturing materials and components similar to or exceeding requirements of project.

SPEC NOTE: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

- .2 Manufacturers list:

- .1 Maxxon Canada, 609 Yarmouth Drive, Waterloo, ON N2K 4C1; Toll-free Phone: 800-356-7887, Phone: 519-746-9300; Fax: 519-746-1276; E-mail: [info@maxxon.ca](mailto:info@maxxon.ca); Web site: [www.maxxon.ca](http://www.maxxon.ca).

### 2.2 DESCRIPTION

- .1 Underlayment system: [10 mm (0.375")] minimum over concrete, [19 mm (0.75")] minimum over wood.

### 2.3 MATERIALS

- .1 Gypsum cement:

- .1 Flamespread to ASTM E 84: 0.
- .2 Fuel contribution to ASTM E 84: 0.
- .3 Smoke development to ASTM E 84: 0.
- .4 Compressive strength: To ASTM C 472, [14 MPa (2000 psi)] [21 MPa (3000 psi)] [22 MPa (3200 psi)] [26 MPa (3800 psi)] [31 MPa (4500 psi)] minimum.
- .5 Dry density: To ASTM C 472, [1602 kg/m<sup>3</sup> (100 pcf)] [1842 kg/m<sup>3</sup> (115 pcf)] [2003 kg/m<sup>3</sup> (125 pcf)].

SPEC NOTE: Use the following two Articles when underlayment is to receive resilient flooring directly.

- .6 Flexural strength: To ASTM C 348[11.4 MPa (1600 psi)] [\_\_\_\_\_ MPa (\_\_\_\_\_ psi)] minimum.
  - .7 Tensile strength: To ASTM C 190, [3.2 MPa (460 psi)] [\_\_\_\_\_ MPa (\_\_\_\_\_ psi)] minimum.
- .2 Sand: 3 mm (0.125") maximum, washed [masonry] [plaster] sand to meet [Maxxon Corporation's] [underlayment manufacturer's] requirements.
    - .1 Acceptable material: Sand Specification 101, manufactured by Maxxon Corporation.
  - .3 Mixing water: Potable, free from impurities.

SPEC NOTE: There are various types of gypsum cement underlayment products for different applications. Specify Gyp-Crete® for residential applications over wood or concrete. Specify Gyp-Crete 2000®/3.2K for residential and light commercial applications over wood or concrete. Specify Dura-Cap® for applications over rough concrete or concrete planks. Specify Therma-Floor® for applications requiring thermal mass over in-floor radiant heating. Specify Commercial Topping® for over various subfloors when underlayment is to receive resilient flooring directly.

- .4 Acceptable material: [Gyp-Crete®] [Gyp-Crete 2000®/3.2K] [Gyp-Crete 2000®/3.2K "Green"] [Dura-Cap®] [Dura-Cap® "Green"] [Therma-Floor®] [Therma-Floor® "Green"] [Commercial Topping®] [Commercial Topping® "Green"] [\_\_\_\_\_], manufactured by Maxxon Corporation.

## 2.4 ACCESSORIES

- .1 Maxxon CSM or Maxxon CSM with water resistant fabric, manufactured by Maxxon Corp.
- .2 Metal lath: Galvanized 1.289 kg/m<sup>2</sup> (3.4 lb/yd<sup>2</sup>) in accordance with Section [09 22 36.23 - Metal Lath] [\_\_\_\_\_].

## 2.5 SOURCE QUALITY CONTROL

- .1 Ensure acoustical sound mat system components and materials are from [Maxxon Corporation] [single manufacturer].

SPEC NOTE: Edit Article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Section 01 25 13 - Product Substitution Procedures.

2.5 PRODUCT SUBSTITUTIONS

- .1 Substitutions: [In accordance with Section 01 25 13 - Product Substitution Procedures] [\_\_\_\_\_] [No substitutions permitted].

3 Execution

SPEC NOTE: Article below is an addition to the CSC SectionFormat™ and a supplement to this Specification. Revise Article below to suit project requirements and specifier's practice.

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: Comply with [Maxxon Corporation's] [manufacturer's] written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions and [Maxxon Corporation's Buildcore Datasheet, Section 03 54 13 – Gypsum Cement Underlayment] [manufacturer's data sheets].

3.2 EXAMINATION

- .1 Site verification of conditions:

- .1 Verify that substrate conditions that have been previously installed under other Sections or Contracts are acceptable for product installation in accordance with [Maxxon Corporation's] [manufacturer's] instructions prior to installation of gypsum cement underlayment system.

3.3 PREPARATION

- .1 Ensure building is enclosed, dry, heated and adequately ventilated before starting gypsum cement underlayment work.
- .2 Fill cracks and voids in concrete with quick setting [patching] [caulking] material before starting gypsum cement underlayment work.

SPEC NOTE: Delete the following Article if drywall work will be completed as part of a tenant fit-up.

- .3 Start gypsum cement underlayment work only after drywall installation is completed.
- .4 Ensure substrate is clean and structurally sound before start of gypsum cement underlayment work.

3.4 INSTALLATION

SPEC NOTE: Gypsum cement underlayment can be applied over many different substrates, including concrete, expanded polystyrene, wood, tile and acoustic sound mats. For precise application instructions for specific substrates, refer to Maxxon Corporation's written instructions listed at <http://www.maxxon.ca>.

SPEC NOTE: Gypsum cement underlayment can also be used as a thermal mass for radiant floor heating. Refer to Maxxon Corporation's written application instructions before starting the applications.

- .1 Apply primer to substrate.

- .2 Apply underlayment in accordance with [Maxxon Corporation's] [manufacturer's] written application instructions and as follows:

- .1 Mix gypsum cement underlayment materials with potable water.
- .2 Apply underlayment to depth required to meet project requirements.

SPEC NOTE: Use the following Article for general underlayment finishing.

- .3 Spread and screed underlayment until required finish is achieved.

SPEC NOTE: Use the following Article if finished underlayment is to receive resilient flooring directly on top of underlayment.

- .4 Finish to ASTM F 710 when underlayment to receive resilient flooring.
- .5 Provide continuous [mechanical] [\_\_\_\_\_] ventilation to remove moisture from area until underlayment has set.
- .6 Avoid further penetrations of finished work.

### 3.5 FIELD QUALITY CONTROL

SPEC NOTE: Use the following Articles when Maxxon Corporation's field services are desired to verify the quality of the installed components. Establish the number and duration of periodic site visits required by Maxxon Corporation and specify below. Consult with Maxxon Corporation for services required. Delete if field services are not required.

- .1 Manufacturer's field services: Have [Maxxon Corporation's] [manufacturer's] technical representative schedule site visits to review work as follows:
- .1 After delivery and storage of products.
- .2 When preparatory work for which work of this Section depends is complete, but before installation begins.
- .3 [Weekly] [Two times] [\_\_\_\_\_] during progress of work [at [25%] and [60%]] [\_\_\_\_\_] of completion.
- .4 Upon completion of work, after cleaning is carried out.

### 3.6 FINAL CLEANING

- .1 Do cleanup in accordance with Section [01 74 00 - Cleaning and Waste Management] [\_\_\_\_\_].
- .2 Upon completion, remove surplus and excess materials, rubbish, tools and equipment.

### 3.7 PROTECTION

SPEC NOTE: Co-ordinate the following Article with Section 01 76 00 - Protecting Installed Construction.

- .1 Protect installed product from damage during construction in accordance with Section [01 76 00 - Protecting Installed Construction] [\_\_\_\_\_].
- .2 Place temporary wood planking over finished underlayment work [at traffic areas] [as directed by [Owner] [Architect] [Consultant] [\_\_\_\_\_]].

END OF SECTION