

0524P CSR HIMMEL IN PARTITIONS – GLAZED
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Branded worksection

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Worksection abstract

This branded worksection *Template* is applicable to internal non-load bearing aluminium partitions, and glazed doors supplied by **CSR HIMMEL**.

How to use this worksection

Customise this worksection *Template* for each project. See A guide to NATSPEC worksections (www.natspec.com.au) for information on *Template* structure, word styles, and completing a worksection.

Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- *0342 Light steel framing.*
- *0382 Light timber framing* for framed internal loadbearing walls or framed walls integral to the building.
- *0451 Windows and glazed doors.*
- *0453 Doors and access panels.*
- *0455 Door hardware.*
- *0461 Glazing.*
- *0467 Glass components* for glass associated with joinery items.
- *0472 Acoustic insulation* for acoustic treatment.
- *0511 Lining* for additional sheet lining products.
- *0525 Cubicle systems* or *0526 Terrazzo precast* as appropriate for toilet or shower partitions.
- *0527 Room dividers.*
- *0531 Suspended ceilings – combined.*
- *0551 Joinery* for timber architraves, skirtings and trim.
- *0572 Miscellaneous furniture.*
- *0641 Applied wall finishes.*

Each of the following worksections contain a single partition system and may be used where appropriate in addition to this worksection:

- *0521 Partitions – demountable.*
- *0522 Partitions – framed and lined.*
- *0523 Partitions – brick and block.*

Material not provided by CSR HIMMEL

This branded worksection *Template* includes generic material which may not be provided by the Product Partner.

Documenting partitions and related work

You may document this and related work as follows:

- Indicate the location and type of partitions on drawings to your office documentation policy.
- Doors that are not part of a proprietary system in *0451 Windows and glazed doors* or *0453 Doors and access panels*.
- Plenum baffles and flanking sound insulation in *0472 Acoustic insulation* or document here.
- Locate fire-resistance rated walls and nominate FRL(s). Document details related to fire-resistance and lateral stability.
- Document requirements for partitions to withstand imposed actions, including wind and seismic actions.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search acumen.architecture.com.au, the Australian Institute of Architects' practice advisory subscription service, for notes on the following:

- Guarantees and warranties.
- Partition system acoustics.

Specifying ESD

The following may be specified by including additional text:

- Recycled material content, e.g. aluminium frames.
- Glass Visible Transmittance to allow natural light to adjacent spaces to reduce artificial lighting requirements.

Refer to NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

CSR HIMMEL INTERIOR SYSTEMS offers a wide portfolio of ceilings, walling, aluminium and architectural hardware products. CSR HIMMEL brings European style and finesse to Australian residential and commercial spaces, introducing the latest global trends and technologies to the interior systems market first.

CSR HIMMEL has consulted with architects, designers, builders and glazing companies to create an aluminium system that suits all design and budget requirements.

1.1 RESPONSIBILITIES

General

Requirement: Provide CSR HIMMEL aluminium partition systems, as documented.

Documented is defined in *0171 General requirements* as meaning contained in the contract documents.

Performance

Strength and stability: To remain stable, and without rattle and signs of deflection or permanent deformation under normal conditions of use, including the slamming of doors.

Serviceability: To support imposed dead loads, seismic loads, wind loads, including designated eccentric loads and not to deflect in excess of the following, where H is the height of the partition:

- The lesser of H/240 or 30 mm for partitions subjected to wind loads and lined with flexible material.
- The lesser of H/360 or 20 mm for partitions subjected to wind loads and lined with brittle materials.
- H/500 for eccentric loads.

Internal walls and ceilings need to withstand internal wind pressures. Refer to AS/NZS 1170.2 (2021) clause 5.3.3 for internal pressure requirements.

1.2 DESIGN

This worksection can be used to document the contractor's design and documentation responsibilities in addition to those set out in DESIGN in *0171 General requirements*. If the design, or completion of the design, is not the responsibility of the contractor, delete this clause and associated requirements.

Refer to NATSPEC TECHreport TR 03 on specifying design and construct for mechanical services. It discusses some of the issues and presents a range of approaches for preparing design and construct specifications that can be applied more generally.

General

Designer: [complete/delete]

Nominate the designer e.g. Registered architect, Professional engineer, Equipment supplier.

Requirements

Responsibility: [complete/delete]

For example, responsibility for design coordination.

Performance requirements: [complete/delete]

For example, an industry organisation's acceptance criteria.

Define verifiable outcomes relating to the overall worksection or system. Use design schedules here, as appropriate, and delete from SELECTIONS, if duplicated.

Authority requirements: [complete/delete]

In particular, draw attention to any specific requirements of the DA and other regulatory bodies. Consider attaching DA conditions, if appropriate. Nominate if any part of the design is a NCC performance solution.

1.3 COMPANY CONTACTS

CSR Himmel technical contacts

Website: www.himmel.com.au/contact-us.

1.4 CROSS REFERENCES

General

Requirement: Conform to the following:

- 0171 General requirements.

0171 General requirements contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. 0171 General requirements references the 018 Common requirements subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.5 MANUFACTURER'S DOCUMENTS

Product information

Website: www.himmel.com.au/Aluminium Systems - Product.

1.6 INTERPRETATION

Definitions

General: For the purposes of this worksection, the following definitions apply:

- Partition - glazed: A partition system consisting of a suite of exposed sections forming door and window frames, ceiling channels, sills, glazing and accessories; and generally intended for use in conjunction with framed and lined partition systems.

Edit the **Definitions** subclause to suit the project or delete if not required. List alphabetically.

1.7 SUBMISSIONS

Certification

Installed partitions: Submit a certificate from an independent testing authority as evidence that the partition system installed conforms to the documented weighted sound reduction index (R_w).

Delete if not required.

For weighted sound reduction index (R_w) rating, see AS/NZS ISO 717.1 (2004) and NATSPEC TECHnote DES 032 for information on airborne sound insulation.

Toughened glass: For each batch of glass, submit certification from the manufacturer as evidence of heat soaking.

Certification by the manufacturer is an alternative to marking heat soaked glass to EN 14179-1 (2016). Delete if marking is to be provided. If required, document glass for heat soaking in SELECTIONS.

Fire performance

Fire hazard properties: Submit evidence of conformity to PRODUCTS, **FIRE PERFORMANCE, Fire hazard properties.**

Operation and maintenance manuals

Requirement: Submit manual to **COMPLETION, Operation and maintenance manuals.**

Products and materials

Manufacturer's data: Submit manufacturer's standard product literature for each system type.

Safety glazing materials: Submit evidence of conformity to AS/NZS 2208 (1996) Appendix A.

Type tests: Submit results as follows:

- Impact resistance.
- Pressure resistance.
- Surface indentation resistance.
- Weighted sound reduction index (R_w): To AS/NZS ISO 717.1 (2004).

Weighted sound reduction index (laboratory test) may also require addition of a spectrum adaption term to conform to NCC requirements.

Type tests are carried out off-site. However, submission of evidence of a successful type test may be called up here for requirements specified in SELECTIONS or PRODUCTS, when there are no SELECTIONS.

Evidence of delivery: Submit delivery docket as evidence of delivery of [complete/delete]

If evidence of delivery to site is required for particular products, consider including this *Optional* style text by changing to *Normal* style.

Samples

Do not call for samples unless warranted by the project size. Document samples to identify the range of properties required for the partition type. If prototypes are specified, separate samples of visible components may not be necessary.

Glazing framing systems: Submit samples of the following:

- Prefinished production extrusions showing the limits of the range of variation in the selected finish, at least 100 mm long.
- Joints made by proposed techniques.
- Skirting, skirting duct, and skirting duct stop ends, returns and removable covers, at least 100 mm long.

Glazing materials: Submit samples of glazing materials, each at least 200 x 200 mm, showing specified visual properties and the range of variation, if any, for each of the following:

- Tinted or coloured glass or glazing plastics.
- Surface modified or surface coated glass.
- Patterned or obscured glass or glazing plastics.
- Ceramic-coated glass.
- Mirrored glass.

Lining materials: Submit samples of lining materials, each at least 200 x 200 mm, showing specified visual properties and the range of variation, if any, for each of the following:

- Gypsum plasterboard.
- Fibre-cement.

Shop drawings

Shop drawings may be warranted for partitions with specialised use, for example bullet proof, fire or acoustic rated or partitions with structural requirements. The drawings should show the partition elevations, or the ceiling grid, or the building grid, or all three. When choosing a grid module, consider the availability of glass sizes, and building access (lift, stairs, doorways, etc.). Consult manufacturers about recommended materials. Add other materials if needed.

General: Submit shop drawings to a scale that best describes the detail, showing the following:

- Plans, sections and elevations of the installation.
- Full size sections of members and details of partition intersections and terminations.
- Dimensions, clearances, tolerances, and provision for expansion.
- Junctions and trim to adjoining surfaces.
- Doors (note if supplied by others) and frames, including door seals, and door stops coordinated with documented door thicknesses.
- Coordination with documented door hardware.
- Glass types, thicknesses and glazing methods.
- Details of safety markings that make glass visible.
- Glass processing required for fixing hardware to frameless glass doors.
- Methods of fixing partitions.
- Details of acoustic treatments to joints.
- Method of providing reticulation of services, access to services, and service outlets.
- Performance data of components and assemblies.
- Specification of materials and finishes.

Subcontractors

General: Submit names and contact details of proposed suppliers and installers.

Evidence of experience: Membership of the Association of the Wall and Ceiling Industry (AWCI) or evidence of experience, listing completed projects of similar size and complexity.

Delete if supplier/installer details are not required.

Substrate acceptance: Submit evidence of installer's acceptance of the wall, floor and ceiling substrate before starting installation.

Warranties

Requirement: Submit warranties to **COMPLETION, Warranties**.

1.8 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Set-out before installation.
- Framed and lined partitions ready to receive the framed and glazed component.
- Completion of installation.

Amend to suit the project, adding critical stage inspections required.

Hold points, if required, should be inserted here.

2 PRODUCTS

2.1 GENERAL

Product substitution

Other products: Conform to **SUBSTITUTIONS** in *0171 General requirements*.

SUBSTITUTIONS in *0171 General requirements* sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling

Glass and glazing materials: Store in a clean, dry area unaffected by weather and to the manufacturer's recommendations. Protect from building materials and loose debris such as wet plaster, mortar, paint and welding spatter.

Handling glass: To the manufacturer's recommendations and without damage.

Product identification

General: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

2.2 FIRE PERFORMANCE

Fire hazard properties

Group number: To AS 5637.1 (2015).

Non-sprinklered buildings: Wall and ceiling linings must either have an *average specific extinction area* less than 250 m²/kg or a *smoke growth rate index* not more than 100 as determined by AS 5637.1 (2015).

Refer to NATSPEC TECHnote DES 020 for information on fire hazard properties.

2.3 TESTING

0171 General requirements defines different tests in **INTERPRETATION, Definitions** and calls for an inspection and testing plan in **TESTING - GENERALLY, Inspection and testing plan**.

General

Impact resistance, glazed partitions: To withstand impact without permanent deformation, damage, failure of fastenings.

- Energy level (J): [complete/delete]

- Test method: Use the apparatus and procedure of the shot-bag test of AS/NZS 2208 (1996) Appendix D.

Select energy level from AS/NZS 2208 (1996) Appendix B. e.g. 90 J for confined spaces such as showers, 135 J or 203 J for larger spaces, and for light and heavy doors respectively, 541 J for virtually unlimited moving body acceleration paths.

The AS/NZS 2208 (1996) Appendix D method is used to test safety glazing materials (laminated or toughened safety glass) for grading. The performance criteria and human dynamics data upon which the test is based are described in Appendix B. Delete if testing for impact resistance is not required.

Pressure resistance: To withstand a uniformly distributed load normal to the plane of the partition without permanent deformation or damage or excessive deflection.

- Load: [complete/delete]

Uniformly distributed load: e.g. 0.25 kPa to 0.5 kPa if in cyclonic area.

- Test method: To the NCC cited ASTM E72 (2015).

The NCC cites ASTM E72 (2015). The current edition is ASTM E72 (2022).

If lightweight construction is used in a wall system that is required to have a FRL, BCA (2022) C2D9 and BCA (2022) Spec 6 require the lightweight construction to be tested to ASTM E72 (2015).

2.4 GLAZED PARTITIONS

General

Requirement: CSR Himmel partition system comprising main frames, door frames, sills, ceiling channels and other extrusions and accessories to form a complete and finished system, as documented.

Frames

Aluminium extrusions: To AS/NZS 1866 (1997).

Sealants

General: Sealant types appropriate for the partition's documented acoustic rating and compatible with partition materials and building substrate.

Tests

Weighted sound reduction index (R_w) for proprietary double glazed systems: Interpolation between test results for similar systems is acceptable, subject to the following:

- Dimensional (thickness or width) differences do not exceed a ratio of 1:1.5.
- Each tested system differs from the proposed system by not more than one variable from the following elements:
 - . Cavity: Width dimension.
 - . Cavity reveal: Acoustic absorption treatment.
 - . First panel: Glass type, glass thickness.
 - . Mounting: Type, seal type.
 - . Second panel: Glass type, glass thickness.

2.5 CSR HIMMEL ALUMINIUM SYSTEM

A Series 104

Description: 104 mm wide central line glazing design.

Multiple configurations and design options available. The frame profile size of 104 mm wide is based on a 64 mm steel stud with 13 mm plasterboard on each side.

A Series 132

Description: 132 mm wide central line glazing design.

Multiple configurations and design options available. The frame profile size of 132 mm wide is based on a 92 mm steel stud with 13 mm plasterboard on each side.

C Series 45

Description: 45 mm wide central line glazing design.

Multiple configurations and design options available, including two profile sizes. The glazing profile size is 45 mm wide. The frame profile size of 104 mm wide is based on a 64 mm steel stud with 13 mm plasterboard on each side. The frame profile size of 132 mm wide is based on a 92 mm steel stud with 13 mm plasterboard on each side.

DS Series 45

Description: 45 mm thick swing and sliding doors to fit the CSR Himmel partition system.

Doors are 45 mm thick and available in various styles and rail sizes.

E Series 104

Description: 104 mm wide edgeline glazing or twin glazing design.

Multiple configurations and design options available. The frame profile size of 104 mm wide is based on a 64 mm steel stud with 13 mm plasterboard on each side.

E Series 132

Description: 132 mm edgeline glazing or twin glazing design.

Multiple configurations and design options available. The frame profile size of 132 mm wide is based on a 92 mm steel stud with 13 mm plasterboard on each side.

2.6 GLASS**Standards**

Glass type and thickness: To AS 1288 (2021), if no glass type or thickness is nominated.

For glass type and minimum thickness refer to AS 1288 (2021) Table 4.1.

Glass thickness may be governed by human safety and other requirements – see AS 1288 (2021) Sections 5, 6 and 7.

Maximum spans for various thicknesses of glass types subject to wind loading are shown in the figures of AS 1288 (2021) Section 4.

Show or nominate a thickness where:

- The glass is to be thicker than required by AS 1288 (2021) or applicable regulations.
- There are unusual conditions requiring detailed calculations for which the designer should be responsible.

In other cases the determination of thickness is usually within the competence of the glazing contractor.

Where thickness is determined by wind actions, the design wind pressure needs to be known in order to interpret the figures and tables of glass sizes and thicknesses in AS 1288 (2021).

Materials and installation: To AS 1288 (2021).

Quality requirements for cut-to-size and processed glass: To AS/NZS 4667 (2000).

The standard specifies requirements for the following:

- Cut sizes of flat, clear ordinary annealed and tinted heat-absorbing glass with glossy, apparently plane and smooth surface, which are used for general and architectural glazing or similar.
- Cut sizes of flat, clear ordinary annealed and tinted heat-absorbing processing glass used for Grade A safety requirements (i.e. toughened or laminated).
- Cut sizes of ordinary annealed, patterned and wired glass used in decorative and general glazing applications.
- Cut sizes of wired glass used for Grade B safety and general glazing applications.
- Processed laminated and toughened glass.

Terminology for work on glass: To AS/NZS 4668 (2000).

Performance

Glass: Free from defects that detract from appearance or interfere with performance under normal conditions of use.

Glazing plastics: Free from surface abrasions, and warranted by the manufacturer for 10 years against yellowing or other colour change, loss of strength and impact resistance, and general deterioration.

Heat soaking

Requirement: Heat soak the following:

- Toughened glass.
- Heat strengthened glass with a surface compression greater than 52 MPa tested to ASTM C1279 (2013).

Standard: To EN 14179-1 (2016).

Marking: To EN 14179-1 (2016) or certified by the manufacturer to AS 1288 (2021) clause 3.8.2.

Heat soaking is a process that reduces the risk of breakage during service from impurities such as nickel sulfide inclusions in the glass. The process puts the glass through a heat cycle to encourage the glass to break under test if it is at risk of inclusions. AS 1288 (2021) clause 3.8.2 requires all monolithic toughened and heat strengthened glass (with a surface compression greater than 52 MPa) to be heat soaked. It also includes exemptions.

Heat soaked thermally toughened soda lime silica glass is defined in EN 14179-1 (2016) and specifies the heat soak process, along with requirements for tolerances, flatness, edgework and fragmentation.

Safety glazing materials

Standard: To AS/NZS 2208 (1996).

AS/NZS 2208 (1996) includes toughened, laminated, wired and organic-coated glass, and safety plastic glazing sheets. The required grade (A or B) is specified in AS 1288 (2021) Section 5 for each application.

See AS/NZS 2208 (1996) Section 2 for dimensional specifications and AS/NZS 2208 (1996) Table 2.3 for overall bow and warpage.

Roller wave distortion (not in the standard) is a consequence of heat treating glass and may be more noticeable in some applications. Consult the manufacturer for more information on tolerances.

Type: Grade A to AS 1288 (2021).

Grade A safety glass is available as either a toughened or laminated toughened product. For projects with more stringent safety requirements, specify laminated toughened safety glass.

Certification: Required.

- Certification provider: An organisation accredited by the Joint Accreditation System of Australia and New Zealand (JASANZ).

Marking: To AS 1288 (2021) clause 5.23.

Unacceptable blemishes in heat-treated flat glass (including tinted and coated glass)

Standard: To AS/NZS 4667 (2000).

Ceramic-coated glass

Description: Heat strengthened or toughened glass with a coloured ceramic coating fused to and made an integral part of the surface to ASTM C1048 (2018), Condition B.

2.7 GLAZING MATERIALS

General

Requirement: Putty, glazing compounds, sealants, gaskets, glazing tapes, spacing strips, spacing tapes, spacers, setting blocks, shims and compression wedges appropriate for the conditions of application and required performance.

Glazing tapes

Standards: To AAMA 800 (2016), Products coded 804.3, 806.3 or 807.3, as applicable.

AAMA 800 (2016) glazing tape definitions:

- 804.3 - Designed for use in less severe back bedding and drop-in glazing applications such as residential and light commercial fenestrations.
- 806.3 - Designed for use in high performance commercial fenestrations in which the tape is subjected to continuous pressure exerted from gaskets or pressure generating stop designs.
- 807.3 - Designed for use in commercial fenestrations in which the tape is not subjected to continuous pressure from gaskets or pressure generating stop designs. This tape may be used in applications described for 804.3 tapes.

Jointing materials

General: Jointing and pointing materials that are compatible with each other and with the contact surfaces and non-staining to finished surfaces. Do not provide bituminous materials on absorbent surfaces.

Primer

Compatibility: Apply the manufacturer's recommended primer to the surfaces in contact with sealant materials.

Extruded gaskets and seals

General: Provide seals, as documented.

Location or function: [complete/delete]

Materials: Non-cellular (solid) elastomeric seals as follows:

- Rubber products: Neoprene, ethylene propylene diene monomer (EPDM) or silicone rubber.

BS 4255-1 (1986) provides more specific product requirements for weather resistant rubber gaskets and seals.

- Flexible polyvinyl chloride (PVC): E type compounds, colourfastness grade B.

BS 2571 (1990) provides more specific requirements for PVC E type (extruded) products.

2.8 ALUMINIUM FRAME FINISHES

Delete finish not required.

Powder coatings

Standard: [complete/delete]

AS 3715 (2002) sets minimum standards for performance criteria. Consult with manufacturers if variations for durability are required.

Colour: [complete/delete]

Nominate colour from the manufacturer's coatings catalogue.

Anodised

Thickness: 10 microns.

25 micron thick anodising may be made available on request.

Finish: Clear anodised satin finish.

Nominate colour from the manufacturer's coatings catalogue.

2.9 PLENUM BAFFLES

General

Requirement: Plenum baffles that maintain the documented fire-resistance level and acoustic performance of the partitions.

Types

Bulk insulation: MARTINI EASY BAFFLE batts compressed between the top of the partition and the slab soffit.

Flexible sheet insulation: Mass loaded vinyl sheeting hung as a curtain from the slab soffit.

Plasterboard: Plasterboard sheets bonded together (if more than one layer).

Select materials and detail baffles to maintain the fire-resistance or weighted sound reduction index nominated for the partition system, or delete if not required.

3 EXECUTION

3.1 GENERAL

Preparation

Substrate: Prepare the substrate to receive the partitions.

Carpet: Fix bottom tracks over polyethylene film. Prevent carpet threads from pulling if drilling or installing fasteners.

Protection

General: Protect existing work from damage during the installation and rectify any damage. Provide temporary coverings if required.

Set-out

General: Set out the partition grid on the centreline of framing members, and to coincide with the ceiling grid and other major building grid, as applicable.

Delete if fully dimensioned.

3.2 INSTALLATION

General

Requirement: Conform to manufacturer's recommendations and assembly details.

Frame erection

Frames: Install main frames, sills, ceiling channels, door and window frames and other framing members as follows:

- Plumb, level, square, straight and true.
- Fixed or anchored to the building structure.
- Isolated from any building loads, including loads caused by structural deflection or shortening.
- Joints tightly fitted and neatly aligned.

- Door and window openings accurately sized.
- Use concealed fixings.

Sealant

Acoustic sealant: If documented or if required to maintain rated acoustic performance, bed sill and ceiling channels in acoustic sealant.

3.3 PARTITION GLAZING

Glass processing

Processing: Perform required processes on glass, including cutting, obscuring, silvering and bending. Form necessary holes, including for fixings, hardware, equipment, access openings and speaking holes. Process exposed glass edges to a finish not inferior to ground arised.

Framed glazing

See AS 1288 (2021) Section 8 for installation of framed glazing.

Assembly: Provide proprietary glazing beads and resilient (PVC, butyl or similar) glazing tapes, gaskets and inserts, to hold the glass firmly without distortion and to withstand the documented loadings.

3.4 PLENUM BAFFLES

Baffles

Plenum baffles may be required for sound attenuation or to maintain fire-resistance levels where rated partitions do not extend to the underside of the structural soffit.

General: Install plenum baffles tightly butted to building structure, service ducts, pipes and conduits and to the top of the partition or to the top of the suspended ceiling directly above the line of the partition. Seal joints, penetrations and intersections and maintain the required performance.

Bulk insulation: Install individual layers to fill space between building structure and the top of the partition or the top of the suspended ceiling.

Flexible sheet insulation: Fix to soffit through a continuous furring channel, hang to meet the top of the partition and extend horizontally 900 mm over the suspended ceiling.

Delete this subclause if 0472 Acoustic insulation is included.

Acoustic rated partitions

General: If a suspended ceiling of equivalent sound insulation rating is not provided, either extend the partitions to the underside of the structural soffit, or provide acoustic rated plenum baffles. The ceiling and baffle to provide a combined rating equivalent to the partition rating.

Edit, or delete if detailed.

3.5 COMPLETION

Cleaning

General: Remove protective coverings, replace damaged glass and leave the work clean, polished, free from defects, and in good condition.

Operation and maintenance manuals

Requirement: Prepare a manual that includes the following:

- Full product information for each system, including product designations, components list, colours and finishes, and accessories.
- Information on all glass, including type, thickness, and details of any colouration or treatment affecting the physical appearance of the installation.
- Information on all doors and hardware supplied as part of the system, including door type, size, finishes, and hardware details.
- Maintenance recommendations.
- Copies of type tests and compliance certificates for fire, acoustic or other system performance requirements.

Edit to suit project requirements.

Compliance with this clause targets the Operations and Maintenance requirement within the Minimum Expectation level of the Verification and Handover credit in Green Star Buildings (2021).

Warranties

Requirement: Cover materials and workmanship in the terms of the warranty in the form of interlocking warranties from the manufacturer and the installer.

- Form: Against failure of materials and execution under normal environment and conditions of use.
- Period: As offered by the manufacturer and the installer.

Use only if warranties extending beyond the defects liability period are available for the particular system. Insert the required warranty period and terms, which should be negotiated beforehand. If the warranty is in the form of separate material and installation warranties, the signatures of both manufacturer and installer are required.

4 SELECTIONS

Schedules are a tool to specify properties required for products or systems. If the principal permits documentation of the product or system by proprietary name, some of the properties may be unnecessary and can be deleted. Document the product or system's location or application here and/or on the drawings with a matching project code. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 GLAZED PARTITION SCHEDULES**CSR HIMMEL glazed partition system schedule**

	GP1	GP2	GP3
Aluminium system			
Frame: Exposed member finish			
Frame: Exposed member colour			
Door - swing			
Door - slider			
Head			
Wall sill			
Skirting			
Glazing			
Safety markings			
Digitally printed film			
Airborne sound insulation			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

CSR Himmel aluminium system: Select from:

- A Series 104. Standard profile size of 104 mm x 25 mm, 104 mm x 35 mm or 104 mm x 50 mm.
- A Series 132. Standard profile size of 132 mm x 25 mm, 132 mm x 35 mm, 132 mm x 50 mm.
- C Series 45. Standard glazing profile of 45 mm wide x 25 mm high.
- DS Series 45. 45 mm thick doors only.
- E Series 104. Standard profile size of 104 mm x 25 mm, 104 mm x 35 mm, 104 mm x 50 mm.
- E Series 132. Standard profile size of 132 mm x 25 mm, 132 mm x 35 mm or 132 mm x 50 mm.

Frame: Exposed member finish: Select from manufacturer's standard range.

Frame: Exposed member colour: Select from manufacturer's standard range.

Door - swing: Nominate timber or aluminium, nominate door thickness.

Door - slider: Nominate style and rail size.

Head: e.g. Plain angle, shadow angle.

Wall sill: Nominate wall sill, if no skirting required.

Skirting: Nominate skirting height 25 mm, 100 mm or 150 mm high, if no wall sill required.

Glazing: Specify the glazing type and thickness in this schedule or the **Glass schedule**. Specifying glazing in this schedule is suitable for projects where the same glass is used for each partition. It can be specified by description, e.g. 6.38 mm clear laminated glass, or by reference to a designated glass type in the **Glass schedule**. The latter approach may be more appropriate for projects with a large number of glazing types, or glazing that requires more detailed specification. Refer to *Guidance for Glass schedule* and NATSPEC TECHnote PRO 006 for guidance on glass types.

Safety markings: Describe line or patterns to AS 1288 (2021) clause 5.19 on making glass visible.

Digitally printed film: Consult the supplier for available colours, patterns, graphics.

Airborne sound insulation: State the required rating to AS/NZS ISO 717.1 (2004) for either the weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation ($R_w + C_{tr}$). This rating is for a building system e.g. partition wall, of which the building element is only one component. It may be better to provide the rating in the appropriate system schedule. It is advisable to obtain the advice of an acoustic consultant on the selection of an R_w or $R_w + C_{tr}$ rating for airborne sound transmission reduction. Refer to NATSPEC TECHnote DES 032 for information.

Internal window schedule

	IW1	IW2	IW3
Window framing suite			
Frame: Exposed member finish			
Frame: Exposed member colour			
Head			
Glazing			
Safety markings			
Digitally printed film			
Airborne sound insulation			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Window framing suite: Nominate proprietary system.

CSR Himmel aluminium system: Select from:

- A Series 104. Standard profile size of 104 mm x 25 mm, 104 mm x 35 mm or 104 mm x 50 mm.
- A Series 132. Standard profile size of 132 mm x 25 mm, 132 mm x 35 mm, 132 mm x 50 mm.
- C Series 45. Standard glazing profile of 45 mm wide x 25 mm high.
- DS Series 45. 45 mm thick doors only.
- E Series 104. Standard profile size of 104 mm x 25 mm, 104 mm x 35 mm, 104 mm x 50 mm.
- E Series 132. Standard profile size of 132 mm x 25 mm, 132 mm x 35 mm or 132 mm x 50 mm.

Frame: Exposed member finish: Select from manufacturer's standard range.

Frame: Exposed member colour: Select from manufacturer's standard range.

Head: e.g. Plain angle, shadow angle.

Glazing: Specify the glazing type and thickness in this schedule or the **Glass schedule**. Specifying glazing in this schedule is suitable for projects where the same glass is used for each partition. It can be specified by description, e.g. 6.38 mm clear laminated glass, or by reference to a designated glass type in the **Glass schedule**. The latter approach may be more appropriate for projects with a large number of glazing types, or glazing that requires more detailed specification. Refer to *Guidance for Glass schedule* and NATSPEC TECHnote PRO 006 for guidance on glass types.

Safety markings: Describe line or patterns to AS 1288 (2021) clause 5.19 on making glass visible. AS 1428.1 (2009) clause 6.6 requires a solid and non-transparent contrasting line to the full width of the glazing where a building is required to be accessible. The NCC cites AS 1428.1 (2001) and AS 1428.1 (2009). The current edition is AS 1428.1 (2021).

Digitally printed film: Consult the supplier for available colours, patterns, graphics.

Airborne sound insulation: State the required rating to AS/NZS ISO 717.1 (2004) for either the weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation ($R_w + C_{tr}$). This rating is for a building system e.g. partition wall, of which the building element is only one component. It may be better to provide the rating in the appropriate system

schedule. It is advisable to obtain the advice of an acoustic consultant on the selection of an R_w or $R_w + C_{tr}$ rating for airborne sound transmission reduction. Refer to NATSPEC TECHnote DES 032 for information.

Glass schedule

	A	B	C
Glass type			
Glass thickness (mm)			
Body tint colour			
Interlayer colour			
Surface coating			
Surface coating: Colour			
Reflective coating: Colour			
Reflective coating: % reflectance			
Surface pattern			
Surface processing			
Surface processing: Pattern			
Surface processing: Colour			
Safety markings			
Digitally printed film			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

This schedule can be used for projects where a large number of different glass types are used, or the glazing requires more detailed specification than it is appropriate to include in other worksections, e.g. *0456 Louvre windows*. If this schedule is used, coordinate it with the relevant worksections so that each glass type is associated with the relevant building element.

Glass type: Refer to NATSPEC TECHnote PRO 006 for guidance on glass types. For special glass requirements beyond those indicated, consider importing an appropriate schedule from the *046 Glass* subgroup.

Glass thickness (mm): It is generally not necessary to specify thickness. Nominate a thickness where:

- The glass is to be thicker than required by AS 1288 (2021).
- There are unusual conditions requiring detailed calculations for which the designer should be responsible.

In other cases, the determination of thickness is usually within the competence of the glazing contractor.

Body tint colour: e.g. grey, bronze, green, blue. Consult the manufacturer for colours available. Do not use body tinted wired glass (cast or polished) in locations exposed to the sun; fracture may result.

Interlayer colour: For laminated glasses only. Consult the manufacturer for the colours available.

Surface coating: Describe by coating function, e.g. solar control, decorative or by coating type, e.g. pyrolytic hard coating, vacuum sputtered or ceramic. Coatings are best described by the manufacturer's brand name.

Surface coating: Colour: e.g. grey, bronze, green, blue. Consult the manufacturer for colours available.

Reflective coating: Colour: e.g. silver, gold, bronze. Consult the manufacturer for colours available. Reflective coatings may be available on either clear or body tinted float. Consult manufacturer.

Reflective coating: % reflectance: Consult the manufacturer for reflectances available.

The manufacturer's brand name is often the best way to identify tinted, reflective, and patterned glasses.

Surface pattern: For patterned glass only. Proprietary patterns are best described by the manufacturer's brand name. Patterns include diffuse reflection (picture glass).

Surface processing: e.g. Screen printing with ceramic paint fused to the surface, sandblasting, acid etching.

Surface processing: Pattern: Proprietary patterns are best described by the manufacturer's brand name.

Surface processing: Colour: Applicable to screen printed patterns only.

Safety markings: Describe line or patterns to AS 1288 (2021) clause 5.19 on making glass visible. AS 1428.1 (2009) clause 6.6 requires a solid and non-transparent contrasting line to the full width of the glazing where a building is required to be accessible. The NCC cites AS 1428.1 (2001) and AS 1428.1 (2009). The current edition is AS 1428.1 (2021).

Digitally printed film: Consult the supplier for available colours, patterns, graphics.

Special glasses schedule

	A	B	C
Mirrored			
Ceramic base painted glass: Base glass			
Ceramic base painted glass: Ceramic coating colour			
Ceramic coated glass: Coating application method			
Patterned			
Acid etched			
Sandblasted			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Refer to NATSPEC TECHnote PRO 006 for guidance on special (decorative) glass types and their properties.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS ISO 717		Acoustics - Rating of sound insulation in buildings and of building elements
AS/NZS ISO 717.1	2004	Airborne sound insulation
AS 1288	2021	Glass in buildings - Selection and installation
AS/NZS 1866	1997	Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes
AS/NZS 2208	1996	Safety glazing materials in buildings
AS/NZS 4667	2000	Quality requirements for cut-to-size and processed glass
AS/NZS 4668	2000	Glossary of terms used in the glass and glazing industry
AAMA 800	2016	Voluntary specifications and test methods for sealants
ASTM C1048	2018	Standard specification for heat-strengthened and fully tempered flat glass
ASTM C1279	2013	Standard test method for non-destructive photoelastic measurement of edge and surface stresses in annealed, heat-strengthened, and fully tempered flat glass
ASTM E72	2015	Standard test method of conducting strength tests of panels for building construction
EN 14179		Glass in buildings - Heat soaking thermally toughened soda lime silicate safety glass
EN 14179-1	2016	Definition and description

The following documents are mentioned only in the **Guidance text**:

AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2021	Wind actions
AS 1428		Design for access and mobility
AS 1428.1	2001	General requirements for access - New building work
AS 1428.1	2009	General requirements for access - New building work
AS 1428.1	2021	General requirements for access - New building work
AS 3715	2002	Metal finishing - Thermoset powder coating for architectural applications of aluminium and aluminium alloys
AS 5637		Determination of fire hazard properties
AS 5637.1	2015	Wall and ceiling linings
BCA C2D9	2022	Fire resistance - Fire resistance and stability - Lightweight construction
BCA Spec 6	2022	Fire resistance - Structural tests for lightweight construction
GBCA Buildings	2021	Green Star Buildings
NATSPEC DES 020		Fire behaviour of building materials and assemblies
NATSPEC DES 032		Airborne sound insulation
NATSPEC GEN 006		Product specifying and substitution
NATSPEC GEN 024		Using NATSPEC selections schedules
NATSPEC PRO 006		Glass types used in buildings
NATSPEC TR 01		Specifying ESD
NATSPEC TR 03		Specifying design and construct for mechanical services
BS 2571	1990	Specification for general-purpose flexible PVC compounds for moulding and extrusion
BS 4255		Rubber used in preformed gaskets for weather exclusion from buildings
BS 4255-1	1986	Specification for non-cellular gaskets
ASTM E72	2022	Standard test method of conducting strength tests of panels for building construction