

0437P ASKIN® XFLAM PERFORMANCE PANEL CLADDING

Branded worksection

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Worksection abstract

This branded worksection *Template* is applicable to a lightweight exterior facade cladding system by ASKIN®. The system comprises prefinished composite panels with metal faces bonded to each side of an insulating ASKIN® XFLAM core. It is designed to provide insulated and air-tight connections and with a range of colours, prints and profiles to suit any commercial or residential application. Some applications include:

- Sports arenas.
- Residential.
- School/University facilities.
- Hospitals.
- Data facilities.
- Shopping centres.
- Medical centres.
- Aquatic centres.
- Sunshades.
- Awnings.

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:

- *0182 Fire-stopping.*
- *0331 Brick and block construction* for brick veneer.
- *0342 Light steel framing* for subframing.
- *0382 Light timber framing* for subframing.
- *0471 Thermal insulation and pliable membranes* for wall insulation, thermal break strips and vapour permeable membranes.
- *0511 Lining* for internal lightweight linings.
- *0531 Suspended ceilings – combined* for suspended soffits.
- *0671 Painting* for in situ paint finishes.
- *0672 Textured and membrane coatings* for in situ application of membrane and surface coatings.

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

- *0432 Curtain walls.*
- *0433 Stone cladding.*
- *0434 Cladding – flat sheets and panels.*
- *0435 Cladding – planks and weatherboards.*
- *0436 Cladding – profiled and seamed sheet metal.*
- *0437 Cladding – insulated panel systems.*

Related branded worksections include:

- *0428p ASKIN VOLCORE performance panel roofing.*
- *0428p ASKIN XFLAM roofing system.*
- *0437p ASKIN XFLAM performance panel cladding.*

- 0437p ASKIN VOLCORE performance panel cladding.
- 0762p ASKIN XFLAM performance panels in cool rooms.

Cross references

Worksections that cross reference this worksection are:

- None.

Documenting this and related work

You may document this and related work as follows:

- Check if your cladding is required to be non-combustible, refer to BCA (2022) Section C and *ABCB Fire performance of external walls and cladding advisory note (2020)*. Consider adding a requirement in **SUBMISSIONS** for evidence of conformance from the contractor. If using a performance solution for facade cladding, type testing to AS 5113 (2016) may be used as the verification method for external walls.
- Weatherproofing: Conform to BCA (2022) F3D5 for Class 2 to Class 9 buildings or BCA (2022) H1D7 for Class 1 and 10 buildings. Alternatively, document a performance solution. Consider adding a requirement for evidence of conformance from the contractor. Refer to NATSPEC TECHnote DES 044 for information on weatherproofing of external walls.
- ASKIN® can provide test reports on request from Ian Bennie and Associates for weatherproofing to AS/NZS 4284 (2008).
- Document the structural support system to your office documentation policy.
- Locate the extent of cladding types, accessories and finishes on drawings to your office documentation policy.
- Penetrations: Show on the drawings the location and extent of penetrations for services and structural elements including flashing details.
- Document the location of openings and penetrations to avoid waste and panel handling times.
- For flush jointed fibre cement soffit lining import the relevant material from *0511 Lining*.
- If required, state the minimum thermal resistance (R-Value) (m².K/W). See NATSPEC TECHnote DES 031 for information on specifying R-Values.
- In bushfire-prone areas, document bushfire protection requirements to AS 3959 (2018) and the NCC. See NATSPEC TECHnote DES 018 for information on bushfire protection.
- Check lead time for imported selections and consider adding a requirement, in **SUBMISSIONS**, for the builder to confirm availability.

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

For example:

- Location of control joints.

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

- Guarantees and warranties.
- Site planning and design for bushfire.

Specifying ESD

ASKIN® XFLAM performance panels have the following sustainable product attributes:

- Thermal and acoustic performance.
- Easy to seal slip joint facilitating efficient hermetically sealed construction to allow controlled air flow and heating and cooling of the internal environment.
- 100% recyclable and may incorporate a proportion of granulated offcuts. The steel skins are recovered and recycled into new steel.
- Measures to minimise condensation leading to greater equipment life and limiting risk of microbial growth.
- Prohibition on use of CFCs and HCFCs as blowing agents.
- Durable components, particularly for corrosion resistance.
- Provision to reduce transmitted noise and vibration.
- pH neutral matrix, which is inert and resistant to water ingress.
- Production plants with extremely low carbon footprint, nil water use and minimal atmospheric or other emissions.
- During its lifetime, ASKIN® XFLAM insulating material will save many times more energy through reduction of heating and cooling requirements than the energy or resources required for its manufacture.

The following may be specified by including additional text:

- Metal cladding finished with low VOC or non-VOC finish.

Refer to NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

ASKIN® is an Australian-owned manufacturer and installer of facade systems, roofing systems and temperature-controlled facilities in Australasia. ASKIN® embraces a customer first approach in delivering sustainable, lifetime value. With a network of 12 sites throughout Australia and New Zealand, ASKIN®'s vast experience is built upon a strong foundation dating back to 1964. ASKIN®'s culture of constant improvement, quality and safety assurance is supported by our technical expertise and ISO 9001 (2015) and ISO 14001 (2015) accreditation.

1.1 RESPONSIBILITIES

General

Requirement: Provide an ASKIN® XFLAM performance panel fully insulated exterior facade cladding system and associated work, as documented.

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

The ASKIN® external wall and facade panel system is fast to install, weather tight and exceeds the thermal requirements of BCA (2022) Section J. The prefinished internal lining and superior spanning capability reduces in installation cost.

It is available in two configurations: Exterior XFLAM Insulated Panels and Exterior XFLAM ViviD Panel.

The ASKIN® XFLAM performance panels external wall system can be used in place of traditional built-up layered walls and offers the following advantages:

- Reduced installation costs: Modular and prefinished requiring fewer girts and structure
- Improved levels of air tightness: External continuous uniform end lap with an internal slip joint.
- Minimised risk of condensation or cold bridging.
- Reduced thickness suitable for residential applications.
- Hygienic and low maintenance finish suitable for food processing, food preparation and cool storage facilities.

The responsibility of the designer is to provide a wall or facade system and associated work that is as follows:

- Designed in conformance with the ASKIN® standard wall, and ViviD façade Systems.
- Resistant to impacts expected in use.
- Free of irregularities.

Corrosion resistance

Material: To the manufacturer's recommendations for distance from marine influence.

Distance from marine influence: [complete/delete]

The distance from marine influence can be used as a guide to determine the finish and grade of steel required, however other factors may also need consideration. For information on determining corrosivity categories in relation to environmental influences, see AS 2312.1 (2014) Table 2.1, AS 4312 (2019) Table 2.1 and Table 4.1. Refer to **CORROSION RESISTANCE, Atmospheric corrosivity category** in *0171 General requirements*, for the project corrosivity categories to AS 4312 (2019). Refer also to BlueScope Technical bulletins BlueScope TB-01A (2023) and BlueScope TB-01B (2022), which discuss the selection of steel roofing and walling products, and the correlation of distance to marine influence to the corrosion categories defined in AS 4312 (2019).

1.2 COMPANY CONTACTS

ASKIN® contacts

Website: www.askin.net.au/contact

1.3 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.

1.4 MANUFACTURER'S DOCUMENTS

Technical manuals

Website: For more technical information:

- General: askin.net.au
- External walls: askin.net.au/downloads/#askin-spec-sheets

1.5 TOLERANCES

Permitted deviations

Requirement: To the ASKIN®'s recommendations.

Structural steelwork for ASKIN® wall cladding: ±5 mm between bearing planes of adjacent supports.

1.6 SUBMISSIONS

Fire performance

Combustibility: Submit evidence of conformity to PRODUCTS, **FIRE PERFORMANCE**, **Error!**

Reference source not found..

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

Fire-resistance level: Submit evidence of conformity to PRODUCTS, **FIRE PERFORMANCE**, **Fire-resistance of building elements**.

Operation and maintenance manuals

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

Products and materials

Thermal insulation performance: Submit evidence of performance to AS/NZS 4859.1 (2018) and AS/NZS 4859.2 (2018).

This is primarily to verify claimed R-Values for NCC compliance.

Type tests: As appropriate for the project, submit results of facade testing as follows:

- Water penetration to AS/NZS 4284 (2008).
- Structural testing to AS/NZS 4284 (2008).
- Resistance to wind pressure:
 - . For non-cyclone regions to AS 4040.2 (1992).
 - . For cyclone regions to AS 4040.3 (2018).

BCA (2022) F3P1 requires that external walls prevent the penetration of water so that internal conditions do not become unhealthy or dangerous.

ASKIN® can provide evidence of ASKIN® XFLAM performance panel cladding conformity to NCC weatherproofing 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.

Prototypes

General: Erect a prototype of each panel type, including at least one example of each component in the system to verify selections submitted as samples, to demonstrate aesthetic effects, to set quality standards for materials and execution, and to verify performance, including wind loading.

Inclusions:

- Typical components, attachments to building structure and methods of installation.
- Window opening with cladding panel, trim and returns.
- Sealant filled joint.

Type: [complete/delete]

Extent: [complete/delete]

Not less than 1800 mm long x 1200 mm high or Not less than 4500 mm long x 3000 mm high.

Location: [complete/delete]

Preferably show on the drawings the location and extent of the prototype and the number and type of components to be included. Delete if the size of the project does not justify a prototype.

Incorporation: Subject to approval, incorporate the prototype in the completed works.

This *Optional* style text may be included by changing to *Normal* style text.

Samples

Approved samples that define the acceptable limits of colour and texture variations are retained on site. If particular or additional samples are required, list them here.

Finish: Submit samples of the cladding material showing the range of variation available.

Sample size: [complete/delete]

Sample sizes are generally 300 x 300 mm or 600 x 600 mm.

Shop drawings

Insulated panel systems: Submit shop drawings to a scale that best describes the detail, showing the following:

- Dimensioned elevations of all elements.
- Details of construction, connections and all support systems.
- Dimensions of all typical elements and of any special sizes and shapes.
- Provision for the exclusion and/or drainage of moisture.
- Jointing details and method of fixing between individual elements and between this installation and adjacent work, including provision for adjustment.
- Sealant types and full size sections of all sealant-filled joints and backing rods.
- Provision for thermal movement.
- Provision for movement under seismic and wind loads.
- Sequence of installation.
- Coordination requirements with other work.
- Schedule of materials, finishes, componentry, hardware and fittings.

Subcontractors

General: Submit names and contact details of proposed ASKIN® approved installers.

Contact ASKIN® for details of ASKIN® approved installers appropriate to construction in your area.

Warranties

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

1.7 INSPECTION

Notice

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

- Workshop assemblies before delivery to the site.
- Framing, pliable membranes and insulation before covering up or concealing.
- Completion of a prototype.

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

Hold points, if required, should be inserted here.

Coordinate with requirements for prototypes or delete.

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

Requirement: Store and handle materials to the manufacturer's recommendations and the following:

- Protect materials including edges and surfaces from damage.
- Keep dry and unexposed to weather.
- Do not drag sheets or panels across each other or over other materials.
- Store off the ground.
- Sealed, unopened packaging on a slightly sloped surface to prevent ponding on panel faces.

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.

Insulation blowing agents

Restricted agents: Conform to PRODUCTS AND MATERIALS, **GENERAL, Prohibited materials** in 0171 *General requirements*.

2.2 FIRE PERFORMANCE

ASKIN® can provide BRANZ, FM, Exova and CSIRO tests reports on request for fire testing.

Combustibility

Cladding: Tested to AS 1530.1 (1994).

Check if your cladding is required to be non-combustible, refer to BCA (2022) Section C and the ABCB *Fire performance of external walls and cladding advisory note (2020)*.

If using a performance solution for facade cladding, type testing to AS 5113 (2016) may be used as the verification method for external walls. Refer to BCA (2022) C1V3 for compliance with BCA (2022) C1P2 for the spread of fire via the external wall.

Fire hazard properties

See NATSPEC TECHnote DES 003 for more information on the fire hazard properties of insulation materials and NATSPEC TECHnote DES 020 on fire behaviour of building materials and assemblies.

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.

Bonded laminated materials: Tested to AS/NZS 1530.3 (1999). Fire hazard indices, as follows:

- Spread-of-Flame Index: 0.
- Smoke-Developed Index: ≤ 3.

Include if bonded laminated material is being used where a non-combustible material is required. See BCA (2022) C2D10(6). Refer to NATSPEC TECHnote DES 020 for information on fire-resistance levels.

Insulation materials: Tested to AS/NZS 1530.3 (1999). Fire hazard indices as follows:

ASKIN® 50 mm thick with Z275 G300 steel skins tested to AS/NZS 1530.3 (1999):

- Ignitability index: 0.
- Spread-of-Flame Index: 0.
- Heat Evolved Index: 0.
- Smoke Developed Index: 1.

ASKIN® 300 mm thick with Z275 G300 steel skins tested to AS/NZS 1530.3 (1999):

- Ignitability index: 0.
- Spread-of-Flame Index: 0.
- Heat Evolved Index: 0.
- Smoke Developed Index: 2.

- Spread-of-Flame Index: ≤ 9.

- Smoke-Developed Index: ≤ 8 if Spread-of-Flame Index > 5 .

Fire-resistance of building elements

Fire-resistance level: Test to AS 1530.4 (2014).

ASKIN® XFLAM 100 mm panels provide an FRL greater than -/30/30. This is the requirement for a non-loading external wall in a Bushfire Attack Level FZ (BAL-FZ) to AS 3959 (2018). ASKIN® can provide test reports on FRL penetration testing. Refer to NATSPEC TECHnote DES 020 for information on fire-resistance levels.

Fire-stops

Requirement: Where fire-stops and smoke flashings are placed between inner faces of the cladding and building elements (such as beam, slab or column faces), install and seal to meet fire test requirements.

Product: [complete/delete]

Nominate the product here. Delete if the selection of the proprietary products is the responsibility of the contractor.

2.3 ASKIN® EXTERIOR XFLAM PANEL SYSTEMS

General

Description: Proprietary panel exterior facade cladding system comprising manufactured, prefinished structural composite panels with metal faces bonded to each side of an insulating, ASKIN® XFLAM core.

ASKIN® Exterior XFLAM Panels are locally manufactured and can be installed vertically or horizontally either mechanically through fixed or with a concealed fixing system. Other width panels are available to suit job specific requirements, Contact your local ASKIN® sales representative to discuss your project requirements.

ASKIN® Exterior XFLAM performance Panels were the first in Australasia to achieve FM accreditation in all three relevant certifications for Insulated Panel Systems – FM 4471 (2010), FM 4880 (2017), FM 4881 (2017) and FM 4882 (2021). These Approvals cover full scale fire, severe hail, and hurricane conditions.

ASKIN® XFLAM insulation core

Material: Syntactic foam sheet with Factory Mutual certification to FM 4471 (2010), FM 4880 (2017), FM 4881 (2017) and FM 4882 (2021).

ASKIN® XFLAM is a market leading, insurer endorsed, innovative product. It is a syntactic foam with excellent mechanical properties, superior insulation values, low toxicity and is completely recyclable. ASKIN® XFLAM achieves a high insulation rating to easily achieve BCA (2022) Section J compliance (R-Values of 1.5 to 8.10 m²K/W). The high insulation value reduces the energy costs required for maintaining a comfortable and efficient environment within the building. ASKIN® XFLAM performance panels were the first in Australasia to achieve FM accreditation in all three relevant certifications for Insulated Panel Systems – FM 4471 (2010), FM 4880 (2017), FM 4881 (2017) and FM 4882 (2021). These Approvals cover full scale fire, severe hail, and hurricane conditions.

Application: Recommended for general commercial construction, specifically coolstores, supermarkets, municipal facilities, schools hospitals, food and drug manufacture, storage, distribution and cold chain.

Internal and external skins

Document requirements in the **ASKIN® XFLAM External Wall and Facade Performance Panel 1200 mm** or **ASKIN® XFLAM Vivid Architectural Performance Panel 1000 mm schedule**. Other width panels are available to suit job specific requirements, Contact your local ASKIN® sales representative to discuss your project requirements.

Skin material and thickness: As documented.

The standard external skin material is 0.5 mm AM100 colour coated steel. The standard internal skin is 0.4 mm Z275 colour coated steel. AZ150, PVDF or ASKIN® 200 Plus are available for alternate performance. All Colorbond® colours or Printech® (PVDF) steel are available. The available skin thicknesses are 0.4, 0.5 or 0.6 mm depending on requirements for structural performance, and fire resistance (minimum 0.5 mm external/0.4 mm internal).

Factory pre-coating: Polyester to a dry film thickness of 25 microns.

Colorbond® Intramax™ Off-white is standard. All Colorbond® or Printech® (PVDF) colours are available. Printech® (PVDF) is a paint finish. ASKIN® 200 Plus, a 200 micron thick polymer coating, is also available. For advice on colour selection, contact your local ASKIN® sales representative to discuss your project requirements.

Internal skins for highly corrosive conditions (AQUATIC): ASKIN® 200 Plus.

The integrated plastisol 200 µm coating is durable, abrasion-resistant and provides outstanding colour retention and corrosion resistance for the lifetime of the building.

Profile: Internal and external panels profiles as documented.

Dimensions

ASKIN® XFLAM external (1200 mm Standard) and **ASKIN® XFLAM Vivid Architectural Performance Panel** (1000 mm Standard) are available in lengths up to 22 m subject to location.

Panel thickness: As documented.

ASKIN® XFLAM performance panels are available in thicknesses from 50 - 300 mm in 25 mm increments. ASKIN® XFLAM Vivid Architectural Performance Panel 1000 mm are available in thicknesses from 85 to 150 mm in 25 mm increments. Thickness is dictated by insulation, structural capacity and fire performance required. Contact ASKIN® to discuss your project requirements.

Panel width:

- Standard panel width: 1200 mm.
- Vivid Architectural Performance Panel width: 1000 mm.

2.4 ASKIN® EXTERIOR XFLAM PANEL

General

Description: Proprietary exterior facade cladding panels comprising manufactured, prefinished composite panels with metal faces bonded to each side of an insulating, ASKIN® XFLAM core. The ASKIN® Exterior XFLAM Panel integrates the ASKIN® Slip Jointing system.

ASKIN® Exterior XFLAM Panels are locally manufactured and can be installed vertically or horizontally either mechanically through fixed or with a concealed fixing system. Other width panels are available to suit job specific requirements, Contact your local ASKIN® sales representative to discuss your project requirements.

ASKIN® Exterior XFLAM Panels achieve FM accreditations in relevant certifications for Insulated Panels - FM 4881 (2017) and FM 4880 (2017) Class 1 Unlimited Height and FM 4882 (2021).

2.5 ASKIN® EXTERIOR XFLAM VIVID PANEL

General

Description: Proprietary exterior facade cladding panels comprising manufactured, prefinished composite panels with metal faces bonded to each side of an insulating, ASKIN® XFLAM insulation core. The ASKIN® Exterior XFLAM Vivid Panel is a concealed fixing panel system.

ASKIN® XFLAM Exterior Vivid Panels are locally manufactured and can be installed vertically or horizontally with a weathertight concealed fixing system. Other width panels are available to suit job specific requirements, Contact your local ASKIN® sales representative to discuss your project requirements.

ASKIN® Exterior XFLAM Vivid Panels achieve FM accreditations in relevant certifications for Insulated Panels - FM 4881 (2017) and FM 4880 (2017) Class 1 Unlimited Height FM 4882 (2021).

2.6 COMPONENTS

General

Cladding support: Provide components, as documented.

Document in the **Cladding support schedule**. If using anchors or attachments cast in the concrete structure, refer to information on embedded anchors in *0432 Curtain walls* and document requirements in the selected concrete worksections.

System accessories

Requirement: ASKIN® system accessories colour matched to performance panels, as documented:

- Top hats.

Steel top hats maximum length 3 m. Aluminium top hats maximum lengths 6 m.

- Preformed insulated corners.

A range of preformed insulated corners as an alternative to traditional corner flashing. Contact ASKIN® Technical regarding suitability of preformed corners and limitations.

Flashings

Prefabricated flashings: Minimum 0.6 mm coated steel to AS 1397 (2021) manufactured to suit the selected external and internal sheet.

Flashings: To AS/NZS 2904 (1995).

Coordinate with *042 Roofing* worksections.

Fasteners (non-cyclonic)

Primary: Self-tapping, self-drilling screws manufactured from carbon steel, anti-corrosion coated and fitted with a 16 mm diameter bonded washer. If the panel's tongue is removed on site, use face fixed fasteners to ASKIN® recommendations.

Cyclonic applications: Contact ASKIN® technical services for recommendations and testing documentation.

2.7 SUNDRY COMPONENTS

Sealants

Materials: One-component compounds with a neutral curing mechanism, vulcanising at room temperature. Provide sealants that:

- Do not foster microbial growth.

The requirement that sealants not foster microbial growth is consistent with AS/NZS 3666.1 (2011). Sealants that support mould growth (e.g. some grades of silicone) and are unsuitable for use in food preparation areas, laboratories, health facilities and the like.

- Bond to the surface of application without primers.
- Are resistant to oils, food acids and water after curing.
- Are non-toxic.
- After curing retain their elastomeric properties over the range of room operating temperatures.
- Are suitable for application by gun or hand tools.
- Are ASKIN® approved for the application.

3 EXECUTION

3.1 GENERAL

Preparation

Substrates or framing: Before fixing cladding, check the alignment of substrates or framing and adjust if required.

Cladding: Make sure the cladding is clean and free of dust and loose particles.

ASKIN® Exterior XFLAM Panel installation

Standard: To AS 1562.1 (2018).

Requirement: Conform to ASKIN®'s recommendations and standard construction drawings.

Detail control joints, flashing at windows and abutments, and penetrations. Consult ASKIN® for further information.

Installation: Install cladding as follows:

- Plumb, level, straight and to documented tolerances.
- Fixed or anchored to the building structure in conformance with the wind action loading recommendations.
- Isolated from any building loads, including loads caused by structural deflection or shortening.
- Allow for thermal movement.

Expansion and contraction for the components needs to be provided for. Temperature change due to climatic conditions must not cause harmful buckling, opening of joints, undue stress on fastening and anchors, noise of any kind or other defects.

Site cut panels:

- Provide accurate, true lines with no distortion.
- Cut with a suitable metal cutting circular type saw and treat exposed edges with a suitable edge protection lacquer.
- Cut openings to the minimum size necessary.

Penetrations larger than 300 x 300 mm: Provide additional structural support.

Swarf: Remove swarf and any foreign matter immediately from the external surface of panels.

Protection: Protect surfaces and finishes, including the retention of protective coatings during installation.

Fasteners, laps, seals, and fillers: Install as documented.

Fixing method: As documented or to one of the following fixing methods to ASKIN®'s recommendations:

- Steel and timber framing: Screw.

Subcontractors

General: Use ASKIN® approved installers for installation and commissioning.

Accessories and trim

Requirement: Provide accessories and trim required to complete the installation, or as documented.

Metal separation

Make sure of compatibility or detail separation.

See AS 1562.1 (2018) Appendix C Table C3 for guidance on the compatibility of metals. See also SA HB 39 (2015) Section 2 on material selection. It is primarily a design responsibility that incompatible metals are not documented or shown to be in contact. Preferably show the separation method on the drawings.

Corrosion can result from water run-off between incompatible surfaces. See AS 1562.1 (2018) clause 3.4.3 and AS 1562.1 (2018) Appendix C Table C4. There are four conditions to be avoided:

- Run-off from copper and copper alloys onto aluminium, zinc, galvanized, or aluminium/zinc-coated surfaces.
- Run-off from glass onto stainless steel, zinc or galvanized surfaces.
- Run-off from plastic onto zinc or galvanized surfaces.
- Run-off from inert catchment surfaces such as glazed terracotta, prepainted steel, aluminium and aluminium/zinc onto zinc or galvanized surfaces.

In marine or high humidity environments, separate green hardwood from aluminium and coated steel.

Typical methods for metal separation include:

- Applying an anti-corrosion, low moisture transmission coating such as zinc or barium chromate primer or aluminium pigmented bituminous paint to contact surfaces.
- Inserting a separation layer such as polyethylene film, adhesive tape or bituminous felt.

Requirement: Prevent direct contact between incompatible metals, and between green hardwood or chemically treated timber and aluminium or coated steel, by either of the following methods:

- Apply an anti-corrosion, low moisture transmission coating to contact surfaces.
- Insert a separation layer.

Incompatible metal fixings: Do not use.

Horizontal cladding

Horizontal cladding surface:

- Minimum slope: 1:15.
- Staining: Slope away from visible vertical facade areas to prevent staining.

Defective and damaged parts

Defective components: Do not install component parts that are defective, including warped, bowed, dented, chipped, scratched, abraded or broken members.

Damaged parts: Remove and replace damaged parts during installation.

Joints

Control joints: To coincide with structural movement joints and as documented.

3.2 COMPLETION**Fasteners**

Requirement: Adjust for weathertightness without distortion of external panel face.

Reinstatement

Extent: Repair or replace damage to the cladding. If the work cannot be repaired satisfactorily, replace the whole area affected.

Damage to prepainted finish: Replace panels with scratches in the prepainted finish.

Cleaning

Requirement: Remove excess debris, metal swarf, solder, sealants and unused materials.

Exposed metal surfaces: Clean surfaces of substances that interfere with uniform weathering or oxidation.

Protection: Remove protective coatings using methods required by the manufacturer after completion.

Protective film will withstand exposure to weather for a limited period of time before losing its peel-off characteristics and causing staining. The gloss coating changes when exposed to plasticisers.

ASKIN® panels: Clean surfaces to the manufacturer's recommendations.

Operation and maintenance manuals

Requirement: Prepare a manual that includes ASKIN® *Warranty and maintenance* for care and maintenance of ASKIN® XFLAM performance panel exterior facade system, including frequency of inspection and recommended methods of access, cleaning, repair and replacement.

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 supplier and the installer.

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

The form(s) required should be provided as part of the contract documentation.

ASKIN® standard warranty is 2 years for workmanship and 10 years for materials.

Subject to maintenance conforming to ASKIN® *Warranty and maintenance*, ASKIN® standard warranty for corrosion or blistering of the skin material is 10 years for general application subject to location and can be up to 25 years depending on the substrate used and the application.

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 PRODUCTS

ASKIN® Exterior XFLAM Panel schedule

	A	B	C
Fire hazard properties: Group number			
Fire-resistance level (FRL)			
Internal environment			
Panel thickness (mm)			
Panel skin material: External			
Panel skin material: Internal			
Panel skin thickness: External (mm)			
Panel skin thickness: Internal (mm)			
Panel profile: External			
Panel profile: Internal			
Panel finish and colour: External			
Panel finish and colour: Internal			
R-Value (m ² .K/W)			
Weighted sound reduction index (Rw)			
Solar absorptance			
Light Reflectance Value (LRV)			
Trim			
Control joint width			
Flashings and cappings			
Fasteners			

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.

Contact ASKIN® to discuss your project requirements.

Fire hazard properties: Group number: Refer to BCA (2022) Spec 7.

Fire-resistance level (FRL): Select from:

- 100 mm thick: - /120/30.
- 160 mm thick: - /120/60.
- 220 mm thick: - /120/90.
- 250 mm thick: - /120/115.
- 275 mm thick: - /120/120.

Panel thickness: Select from 50 to 250 mm in 25 mm increments.

Panel skin material: Internal and external Select from:

- AM100 colour coated steel.
- Z275 colour coated steel.
- AZ150 colour coated steel.
- ASKIN® 200 Plus.
- Colorbond® Intramax™
- Stainless steel.
- Aluminium.
- Printech® steel.

Panel skin thickness: Internal and external: e.g. 0.4, 0.5 or 0.6 mm.

Panel profile: Internal and external: Select from:

- Flat.
- Mesa.
- Rib.
- Silcline.
- Shadlowline.
- Australine.
- Express joint.
- Unideck.
- Metric (1.0 m wide).

Panel finish: External: Select from Colorbond®, Colorbond®, Intramax™, Printech® (PDVF) or ASKIN® 200 Plus ranges.

Panel finish: Internal: Select from Colorbond®, Colorbond®, Intramax™, Printech® (PDVF) or ASKIN® 200 Plus ranges.

R-Value: Select from the manufacturer's range. AS/NZS 4859.1 (2018) requires that R-Value is declared at 23°C for insulation products sold in Australia.

Weighted sound reduction index (Rw): Select from the manufacturer's range.

Solar absorptance: Select from manufacturer's range. Light (< 0.40), Medium (0.40 to 0.60), Dark (> 0.60). See BCA (2022) J3D8 for external walls to a Class 2 building or a Class 4 part of a building.

Light Reflectance Value (LRV): If required, nominate the light reflectance value. Some local government authorities limit the light reflectance value for building exteriors. Refer to the relevant local government authority for any requirements.

Trim: e.g. Proprietary accessories for sills, reveals or corner returns.

Flashings and cappings: e.g. Prefinished sheet metal to match cladding colour. Coordinate with 042 Roofing worksections.

Fasteners: e.g. Concealed or Pierced: Crest or Valley.

ASKIN® Exterior XFLAM Vivid Panel schedule

	A	B	C
Fire hazard properties: Group number			
Internal environment			
Panel thickness (mm)			
Panel skin material: External			
Panel skin material: Internal			

	A	B	C
Panel skin thickness: External (mm)			
Panel skin thickness: Internal (mm)			
Panel profile: External			
Panel profile: Internal			
Panel finish and colour: External			
Panel finish and colour: Internal			
R-Value (m ² .K/W)			
Weighted sound reduction index (Rw)			
Solar absorptance			
Light Reflectance Value (LRV)			
Trim			
Control joint width			
Flashings and cappings			
Fasteners			

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.

Contact ASKIN® to discuss your project requirements.

Fire hazard properties: Group number: Refer to BCA (2022) Spec 7.

Panel thickness: Select from 85 to 150 mm in 25 mm increments.

Panel skin material: Internal and external Select from:

- AM100 colour coated steel.
- Z275 colour coated steel.
- AZ150 colour coated steel.
- ASKIN® 200 Plus.
- Colorbond® Intramax™
- Stainless steel.
- Aluminium.
- Printech® steel.

Panel skin thickness: Internal and external: e.g. 0.4, 0.5 or 0.6 mm.

Panel profile: Internal and external: Select from:

- Seamless
- Silkline.
- Ambience.
- Infinite.
- Transform.

Panel finish: External: Select from Colorbond®, Colorbond®, Intramax™, Printech® (PDVF) or ASKIN® 200 Plus ranges.

Panel finish: Internal: Select from Colorbond®, Colorbond®, Intramax™, Printech® (PDVF) or ASKIN® 200 Plus ranges.

R-Value: Select from the manufacturer's range. AS/NZS 4859.1 (2018) requires that R-Value is declared at 23°C for insulation products sold in Australia.

Weighted sound reduction index (Rw): Select from the manufacturer's range.

Solar absorptance: Select from manufacturer's range. Light (< 0.40), Medium (0.40 to 0.60), Dark (> 0.60). See BCA (2022) J3D8 for external walls to a Class 2 building or a Class 4 part of a building.

Light Reflectance Value (LRV): If required, nominate the light reflectance value. Some local government authorities limit the light reflectance value for building exteriors. Refer to the relevant local government authority for any requirements.

Trim: e.g. Proprietary accessories for sills, reveals or corner returns.

Flashings and cappings: e.g. Prefinished sheet metal to match cladding colour. Coordinate with 042 Roofing worksections.

Fasteners: e.g. Concealed or Pierced: Crest or Valley.

Cladding support schedule

	A	B	C
Product			
Material			
Vertical members			
Horizontal members			
Spacing: Vertical members			
Spacing: Horizontal members			

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.

Product: Nominate proprietary items or describe the cladding support system and document the subframe to your office documentation policy. Fabricated panels are usually secret fixed to the structural support or the subframe. Cross reference 0342 *Light steel framing* for the subframe or import the relevant clauses, if required.

Material: e.g. Galvanized steel, Anodised aluminium or Stainless steel appropriate to the project's location.

If using anchors or attachments cast in the concrete structure, refer to information on embedded anchors in 0432 *Curtain walls* and document requirements in the selected concrete worksections.

REFERENCED DOCUMENTS**The following documents are incorporated into this worksection by reference:**

AS 1397	2021	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS 1530		Methods for fire tests on building materials, components and structures
AS 1530.1	1994	Combustibility test for materials
AS/NZS 1530.3	1999	Simultaneous determination of ignitability, flame propagation, heat release and smoke release
AS 1530.4	2014	Fire-resistance tests for elements of construction
AS 1562		Design and installation of sheet roof and wall cladding
AS 1562.1	2018	Metal
AS/NZS 2904	1995	Damp-proof courses and flashings
AS 4040		Methods of testing sheet roof and wall cladding
AS 4040.2	1992	Resistance to wind pressures for non-cyclone regions
AS 4040.3	2018	Resistance to wind pressures for cyclone regions
AS/NZS 4284	2008	Testing of building facades
AS/NZS 4859		Thermal insulation materials for buildings
AS/NZS 4859.1	2018	General criteria and technical provisions
AS/NZS 4859.2	2018	Design
AS 5637		Determination of fire hazard properties
AS 5637.1	2015	Wall and ceiling linings
FM 4471	2010	Approval standard for Class 1 panel roofs
FM 4880	2017	Approval standard for Evaluating the Fire Performance of Building Panel Assemblies and Interior Finish Materials
FM 4881	2017	Approval standard for Class 1 exterior wall systems
FM 4882	2021	Class 1 Interior wall and ceiling materials or systems for smoke sensitive occupancies

The following documents are mentioned only in the Guidance text:

AS/NZS 2312		Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
AS 2312.1	2014	Paint coatings
AS/NZS 3666		Air-handling and water systems of buildings - Microbial control
AS/NZS 3666.1	2011	Design, installation and commissioning
AS 3959	2018	Construction of buildings in bushfire-prone areas
AS 4312	2019	Atmospheric corrosivity zones in Australia
AS 5113	2016	Classification of external walls of buildings based on reaction-to-fire performance
SA HB 39	2015	Installation code for metal roof and wall cladding
BCA C1P2	2022	Fire resistance - Fire resistance - Spread of fire
BCA C1V3	2022	Fire resistance - Fire resistance - Fire spread via external walls
BCA C2D10	2022	Fire resistance - Fire resistance and stability - Non-combustible building elements
BCA F3D5	2022	Health and amenity - Roof and wall cladding - Wall cladding
BCA F3P1	2022	Health and amenity - Roof and wall cladding - Weatherproofing
BCA H1D7	2022	Class 1 and 10 buildings - Structure - Roof and wall cladding
BCA J3D8	2022	Energy efficiency - Elemental provisions for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building - External walls of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building
BCA Section C	2022	Fire resistance
BCA Section J	2022	Energy efficiency
BCA Spec 7	2022	Fire resistance - Fire hazard properties
ABCB Fire performance	2020	Fire performance of external walls and cladding advisory note

BlueScope TB-01A	2023	Steel roofing products - Selection guide
BlueScope TB-01B	2022	Steel walling products - Selection guide
GBCA Buildings	2021	Green Star Buildings
NATSPEC DES 003		Fire hazard properties of insulation and pliable membranes
NATSPEC DES 018		Bushfire protection
NATSPEC DES 020		Fire behaviour of building materials and assemblies
NATSPEC DES 031		Specifying R-Values
NATSPEC DES 044		Weatherproofing of external walls
NATSPEC GEN 006		Product specifying and substitution
NATSPEC GEN 024		Using NATSPEC selections schedules
NATSPEC TR 01		Specifying ESD
ISO 9001	2015	Quality management systems - Requirements
ISO 14001	2015	Environmental management systems - Requirements with guidance for use