



Product & Installation Guide

AluExcel

Aluminium angle edging
for hard landscaping



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Aluminium angle edging for hard landscaping

L-profile aluminium edge restraint for hard landscape surfaces available in either Flexible or Rigid lengths in various heights and thicknesses. Flexible lengths shown in the images above. Powder coat finishes available on request.



Benefits:

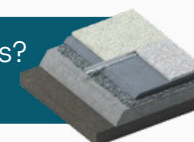
- Highest quality, durable aluminium alloy won't rust
- Create clean curved or straight lines by hand
- Fast, simple installation saves time and money
- Strong base with tapered top edge gives stability to a refined design
- Works between all hard/soft surface types

Suitable for:

- Blocks and pavers
- Asphalt and tarmac
- Wet-pour rubber safety surfacing
- Resin bound gravel



Edging Height		25 mm	40 mm	50 mm	65 mm	75mm	100mm	120 mm	150 mm
Flexible Version		101012	101014	101016	101018	101020	101022	101024	101028
Rigid Version		101013	101015	101017	101019	101021	101023	101025	101030
Dimensions	Edging thickness (top bead)	5.5 mm	6 mm	6 mm	6 mm	6.5 mm	6.5 mm	7 mm	8.5 mm
	Edging length	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm
	Edging foot width	45 mm	45 mm	45 mm	45 mm	70 mm	70 mm	70 mm	70 mm
	Fixing stake length	250 mm	250 mm	250 mm	250 mm	250 mm	250 mm	250 mm	250 mm
Other	Minimum radius by hand*		1000mm					1500 mm	
	Minimum radius in factory				400 mm	500 mm		600 mm	
	Available finishes	Mill finish/ powder coat to order							
	Material Specification	6005A aluminium							
Recycled content		Part recycled/ 100% recyclable							



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Tools Required

- ✓ Hammer
- ✓ Hacksaw / angle grinder
- ✓ Level
- ✓ Tape measure
- ✓ Spray paint
- ✓ String line
- ✓ Shovel / spade

Fixings included

- ✓ 250mm Spiral Fixing Stake
- ✓ Strip Connector



Standard method to compacted MOT Type 1 sub-base or similar material

1

Sub-base & set out

Lay suitable sub-base to required depth (to engineer's specification). Thorough compaction of the sub-base is essential to ensure a successful installation. Ensure sub-base extends 100-150mm beyond the prepared edge restraint line.



2

Laying the edging

Lay a thin dry-mix bedding layer (e.g. sharp sand and cement) beneath the edging foot to approximately 10mm. This thickness can be varied to adjust levels as required. This also ensures continuous support under the foot of the edging. The edging should not require a wet concrete haunch unless in non-standard applications.

Place the edge restraint and set to correct position.

Fix the Spiral Fixing Stakes through edging foot in the pre-punched holes, at a maximum of 500mm centres. Ensure the nails are firmly secured in the ground and down to the foot of the edging.

Alternative fixing method: Use concrete screws if fixing into a cured concrete foundation. Contact the technical team for more information

Note: Additional staking is recommended when laying curves or the area is subject to heavy traffic.



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Handling and hazards



SHARP CORNERS AND EDGES!

Wear gloves



BE SAFE!

Wear high visibility clothing, hard hats, and any other PPE required on site.

DISCLAIMER

These instructions are for guidance only and the installer is responsible to use their discretion to install the products in the best possible way for their respective application. Kinley Systems will not be held liable for product failure or poor performance as a result of poor quality installation. If any errors are found in this guide please email us at sales@kinley.co.uk

SUPPORTING DOCUMENTS

More information on the AluExcel products can be found at www.kinley.co.uk in the Resource Centre. In particular, look for the CAD Drawings, Data Sheet (DS-AE-0916) and the Edging Book (BR-EB-0116).

3

Connecting the edging

Use the Strip Connector (provided) to link lengths of AluExcel together. Slide halfway into channel on inside of the edge restraint, and connect with other length.

IMPORTANT!: When laying hot surfacing material (i.e. tarmacadam) leave a 4-6mm gap between each 2.5m length to allow for thermal expansion.



4

Laying surfaces

The next stage is to lay the surfacing.

When more than one layer is required, the base course should be properly applied and compacted before proceeding to the final wearing course. Take care not to damage the edge restraint with the compaction equipment.

Lay final surface.

Ensure top of edge restraint sits just below level of top surfaces, especially if top surface is to be compacted (i.e. tarmacadam).

Backfill behind edging or lay additional hard surface as required.



5

Hot lay surfacing

Only in relation to hot rolled surface applications.

Compact surfacing with roller. Ensure first pass with roller is 50mm clear of AluExcel, with vibrating function turned off.

Final pass should be made as close to the edge as possible.

On the final wearing course, and where applicable, roller should be run over edge of AluExcel to ensure full compaction and a neat finish.

Note Hot lay surfacing e.g. tarmacadam, should not exceed 180°C.



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Applications

To edge or demarcate asphalt, rubber coating and other hard landscape surfaces. Suitable for parks, playgrounds and around building perimeters. AluExcel uses Aluminium Alloy 6005A T6 which is a high-performance alloy with a high natural resistance to corrosive conditions in normal environments. It also has a higher resistance to heat than other aluminium alloys making it suitable for use with hot asphalt or tarmacadam surfacing up to 180°C.

Installation information¹

18mm profile: By mounting on bitmac basecourse using proprietary masonry fixings.

All others: By mounting on compacted substrate (e.g. MOT Type 1) using 250mm steel Spiral Fixing Stakes. Other sub-base materials can be used – please contact our technical team to discuss. A bedding layer of dry mix 3:1 sharp sand / cement is recommended to ensure continual support of the edge restraint. When mounting on existing asphalt or concrete, use masonry nails or screw and plug fixings.

Lengths can be joined using a Strip Connector fitted onto the inside face of the product, except for the reversed profile where the Strip Connector is used on the rear of the product (in situations where the outside surface is higher than the inside surface, leaving the inside face visible).

Storage & Handling

The product is securely packed in a single flute cardboard carton to ensure no movement of the product in transit and each carton is sealed with a fibre tape. Depending on the size / weight of the consignment this may be palletised.

Whilst there are no specific weight restrictions on what is or is not safe to lift in manual handling, an assessment of the health and safety risks should be undertaken and measures taken to reduce the risk of injury so far as reasonably practicable.

The following guidelines may be useful:

- Each person should be fully trained in manual handling techniques.
- The use of handling aids such as a trolley, folk-lift, pallet truck or conveyor should be used if moving large volumes of cartons.
- Break up large consignments into more manageable loads.
- Ensure that the product is stored at a reasonable height, so avoiding the lifting of cartons from floor level or above shoulder height.
- Reduce carrying distances of cartons.

Protective Equipment

We recommend that PPE (Personal Protective Equipment) is used when installing AluExcel:

- Good strong safety boots/shoes to protect the feet.
- Protective eyewear such as safety glasses.
- Strong gloves to protect the hands.
- If using loud cutting equipment then ear plugs or defenders should be worn.

First Aid

The Health and Safety Regulations 1981 require all construction sites to have the following:

- A first aid box with enough equipment to cope with the number of workers on site.
- An Appointed Person to take charge of first-aid arrangements. The Appointed Person looks after first aid equipment and facilities and calls the emergency services when required. Appointed Persons do not need first aid training.
- A First-Aider who has undertaken training and holds an HSE approved qualification to administer firstaid. This means that they must hold a valid certificate of competence in either:
 - First aid at work (FAW) issued by a training organisation approved by HSE
 - Emergency first aid at work (EFAW) issued by a training organisation approved by HSE
- A recognised Awarding body of Ofqual/Scottish Qualifications Authority.
- The number of first-aiders will depend on the site.
- Information should be clearly displayed on site telling workers the name of the Appointed Person(s) or First Aider(s) and where to find them.

Fire Protection

AluExcel is made using Aluminium Alloy 6005A T6 which does not burn and is not a fire hazard.

Stability

Aluminium Alloy 6005AA T6 grade alloy is a high-performance alloy. It has a higher degree of strength, durability and resistance to heat than the less robust 6005A grade alloy.

All building materials are eventually degraded by weathering, corrosion, rot and decay. Aluminium's natural ability to resist these influences better than many materials is one of its most widely appreciated features. Aluminium reacts with the oxygen in the air to form an extremely thin layer of oxide; this layer is dense and provides excellent corrosion protection, and is self-repairing if damaged.

In its unprotected 'Mill Finish' form aluminium is used very successfully for long-life everyday products making AluExcel exceptionally suitable for use as a commercial landscape edging system.

¹The Costs and Installation Information given in this document are intended as a guide only. We recommend that formal quotations and professional opinions are obtained before work is commissioned. ExcelEdge accepts no responsibility for any damage or loss as a result of using the Installation Information. We will be happy to engage in any discussion with regard to specific project applications.

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Environmental Issues

AluExcel is manufactured from recycled aluminium (80% recycled content minimum) and is 100% recyclable. As a result, the whole life cost of aluminium edging is excellent as it is sold for recycling not paid disposal. The 20% virgin aluminium is blended with the recycled content to help achieve the proper chemical content for the alloy specification, which gives the specified mechanical properties for strength. Scrap aluminium is a valuable resource and can be recycled repeatedly.

There are plenty of raw materials for the production of aluminium. In a variety of forms, aluminium compounds make up a full 8% of the Earth's crust. Bauxite is the main starting point in the production of aluminium and given current rates of production there is enough bauxite to last another 200 to 400 years, this based upon no increases in the use of recycled aluminium and no further discoveries of bauxite. Furthermore, the volume of aluminium being recycled is at a level where the requirement for virgin alumina is decreasing – further lessening the environmental impact.

Get in touch to discuss your next project.

Supporting Documents

More information on the AluExcel products can be found at www.kinley.co.uk in the Resource Centre. In particular, look for the CAD Drawings, Installation Guide and Edging Book.

Loading Analysis²

Loading analysis was undertaken on the AluExcel 75mm edging using Finite Element Analysis. The analysis was based on a distributed load of 500mm directly down on to the top of the edging. On the distributed load test, failure occurred once loading reached 28500N. More information on the Finite Element Analysis testing is available on request.

