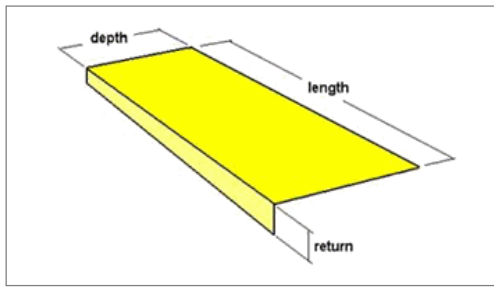


SIZES AVAILABLE

INDUSTRIAL: STAIR NOSINGS



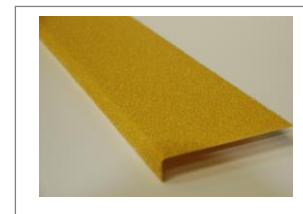
Length of Nosing: Safety Step produce a range of standard or 'in stock' length Industrial Nosing's from 450mm (18") to 1200mm (48") to accommodate almost all widths of steps. Other sizes up to a length of 3.6m (12') can be ordered. As the very ends of each stair tread are seldom walked on, Safety Step recommends that Industrial Stair Nosing's are fitted centrally on each step leaving a gap at each side of between 100mm (4") and 150mm (6").

Depth of Nosing: Three standard depths are offered as three series of product codes. 75mm (3") depth, 150mm (6") depth and 225mm (9").

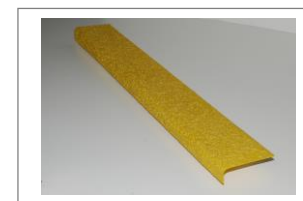
Return: The return on all Industrial Stair Nosing's is standard at 25mm (1"). This nosing return has three key functions

- a) It adds substantial rigidity to the stair nosing.
- b) When ascending the steps the drop offers good step edge definition.
- c) It allows the anti-slip texture to extend right to the very edge of the stair nosing offering maximum grip.

Length x Width x Return		Part Number
Metric	Imperial	
450 x 75 x 25	18" x 3" x 1"	PIN0-75
600 x 75 x 25	24" x 3" x 1"	PIN1-75
750 x 75 x 25	30" x 3" x 1"	PIN2-75
900 x 75 x 25	36" x 3" x 1"	PIN3-75
1030 x 75 x 25	41" x 3" x 1"	PIN4-75
1200 x 75 x 25	46" x 3" x 1"	PIN5-75
3600 x 75 x 25	12' x 3" x 1"	PIN6-150
450 x 150 x 25	18" x 6" x 1"	PIN0-150
600 x 150 x 25	24" x 6" x 1"	PIN1-150
750 x 150 x 25	30" x 6" x 1"	PIN2-150
900 x 150 x 25	36" x 6" x 1"	PIN3-150
1030 x 150 x 25	41" x 6" x 1"	PIN4-150
1200 x 150 x 25	48" x 6" x 1"	PIN5-150
3600 x 150 x 25	12' x 3" x 1"	PIN6-150
450 x 225 x 25	18" x 9" x 1"	PIN0-225
600 x 225 x 25	24" x 9" x 1"	PIN1225
750 x 225 x 25	30" x 9" x 1"	PIN2-225
900 x 225 x 25	36" x 9" x 1"	PIN3-225
1030 x 225 x 25	41" x 9" x 1"	PIN4-225
1200 x 225 x 25	48" x 9" x 1"	PIN5-225
3600 x 225 x 25	12' x 9" x 1"	PIN6-225



150mm Deep Nosing



150mm Deep Nosing

Safety Step industrial anti-slip products are manufactured entirely by hand in a unique one step manufacturing process then trimmed and cut to size. By incorporating all of the separate elements of the finished product into one **seamless fibreglass composite material** we are able to build the strongest and most durable product available on today's market. The general term for the way we make our product is Fibre Reinforced Plastic or FRP for short, or more commonly called fibreglass.

FRP doesn't dent, corrode, rot, delaminate, support bacteria and has a high strength to weight ratio being several times higher than steel on a weight to weight basis. It demonstrates a very high resistance to UV and other environmental conditions is highly resistant to chemical attack and has an indefinite lifespan. The particular base resin used by **Safety Step** also features extremely good fire retardant and low smoke emission characteristics.

Almost all other stair nosing and floor plate manufacturers adopt a layering or bonding method where an anti-slip coating is bonded to a pre-formed base such as steel or pultruded material. This method invariably sets up a weak point where the two dissimilar components, the top coating and the base material, meet. This weak point will be further strained by stress set up within the product through movement associated with normal use or through thermal expansion and contraction. Such a bonding method also has a low tolerance to impact and typically the top coating will peel away from damaged or impacted areas.

The products you receive from **Safety Step** are constructed from a base mix of fire retardant polyester resins interspersed with layers of immensely strong interwoven glass fibre. The colour pigmentation is floated right through the full thickness of the material so that it is impossible to wear the colour off and become unsightly. The fused alumina anti-slip grain is then forced under pressure into the base mix while it is still wet, followed by a final resin layer laid over the top of it all. This entire composite mix is then cured at optimum temperatures until fully hard.

**No layering, no bonding, no weak spots,
just one immensely strong composite
whole.**

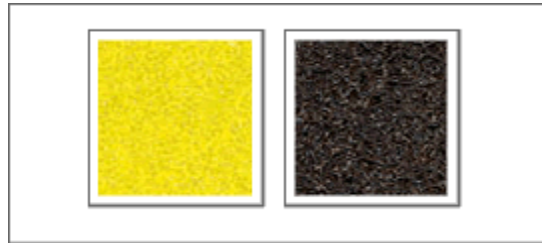


With **safety Step** products the anti-slip grit cannot be knocked out as happens with over-coating methods, no peel back or chipping can occur around localised damage points, the colour cannot be worn off, flexing and movement will have no effect on them and with the FRP material, there is a 100% guarantee that it cannot rust or corrode.

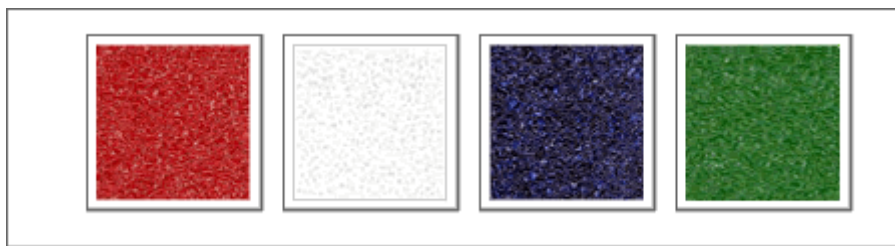
You simply get the toughest, most durable and longest lasting nosing's available anywhere in the world.

AVAILABLE COLOURS & STYLES INDUSTRIAL: STAIR NOSINGS

Industrial Stair Nosing's are available in two 'in stock' or standard colours, SAFETY YELLOW and BLACK

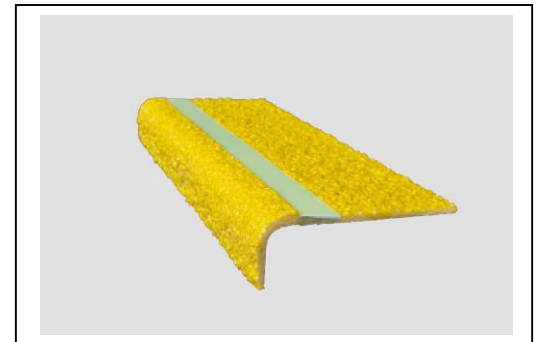


Additionally four other colours are available 'on request', RED, WHITE, BLUE and GREEN.



Glow in the dark capability can be included within any Industrial Stair Nosing to provide extremely high, long lasting definition of step edges in low and no light situations.

A fully imbedded, glow in the dark strip shows green in daylight and glows bright green/yellow in darkness and will **glow for a minimum of 12 hours** once fully charged by any light source.



Custom designs such as two colour nosings, wording and graphics can also be included into the body of the Industrial Nosing upon request.



With the Safety Step manufacturing process, all colours, text and graphics are imbedded within the body of the product and not simply spray painted on the surface.

GRADES AVAILABLE

INDUSTRIAL: STAIR NOSINGS

The super tough abrasive grit used to form the high traction surface on stair nosings is one of the hardest compounds known to man. **Fused Alumina grit** is bound within the glass reinforced body of the stair nosing and presents a top surface with almost diamond hard characteristics.

It IS NOT layed on top as a surface coating as with alternate brands of product, so will not chip or break out. The fused alumina chip is forced under pressure into the wet resin that makes up the thickness of the product to become a composite material that is then cured into one single, seamless material.

Here is how hard fused alumina is, almost as hard as diamond:

MOHS scale comparison	
Diamond	10
Silica Carbide	9.7
Fused Alumina	9.4
Hard Quartz	7.0
Steel	6.0

Watch out for low cost, soft materials used by other manufacturers such as crushed quartz and crushed glass. It only lasts a few weeks.

Safety Step offers a range of grit sizes which are categorized as the following six grades, together with typical applications:

FINE - Commercial buildings, swimming pools.

INDUSTRIAL - For most industrial applications – heavy duty wear.

OFFSHORE - Oil platforms, heavily soiled and oily areas.

EXTREME – For heavy snow and other extreme applications.

As different manufacturers have different names for each grade of their anti-slip material, the following comparisons of **Safety Step** gradings may be used.

Grade	U.S. Grading	Microns (average)
Fine	60 mesh	250
Industrial	16 mesh	356
Offshore	12 mesh	686
Extreme	8 mesh	940



On-site cutting

Industrial Stair Nosing's are very easily shaped or cut to length should this is required. We recommend using a dry cut diamond blade operated in a hand held 100mm angle grinder.

As dust and loose chips will be generated through the cutting process, eye protection and dust masks should be worn.

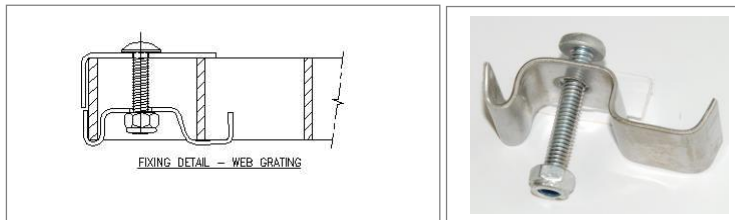
No edge sealing is required where the product has been cut.

Drilling Instructions

Drilling for screw or bolt fixings is a very easy task. Always measure back from the inside of the drop and mark the fixing hole location on the underside of the FRP material. Using a standard jobbing bit, simply drill through the material from the smooth rear face to the anti-slip top face. Ensure that adequate personal safety precautions are taken.

OPEN GRILLE / GRATING

Industrial Stair Nosing may be installed on open grate stairs with stainless steel Saddle Assemblies (supplied by **Safety Step**) in conjunction with M6 x 35mm stainless steel bolts and M6 stainless steel nyloc nuts.



FIXING ASSEMBLY

TIMBER DECKING

Industrial Stair Nosing's may be installed to timber stairs with 8g x 35mm self tapping screws and urethane mastic. The mastic assists with adhesion but importantly stops bounce or chatter when the nosing is walked on.

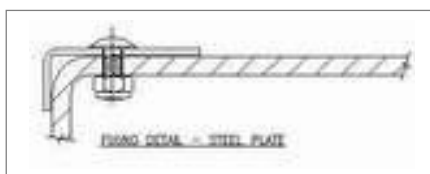


8g x 35mm Screw

FLAT STEEL SHEETING and TREAD PLATE

Urethane based mastic adhesive will create a strong and permanent bond provided the surfaces are clean, dry and free of oil and grease. Clean the tread surface and lightly sand then wipe with a solvent damp rag to remove dust. Also wipe the back of the stair nosing and when dry apply the urethane mastic. Place the nosing in location and apply moderate weight to create a thin 'gasket' of adhesive. Allow 6 - 8 hours to cure.

If access to the underside of the stair treads is easy then you may wish to also use stainless steel M6 x 35mm machine screws with M6 stainless steel nyloc nuts. If access to the underside of the stair tread is not possible then use 4.8mm x 14mm (or similar) Monel steel rivets.



M6 x 35mm Machine Screw



4.8mm x 14mm Monel Rivet

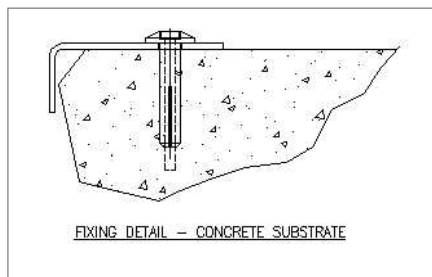
INSTALLATION

INDUSTRIAL: STAIR NOSINGS

MASONRY FLOORS

Just as with steel treads, urethane based mastic adhesive will create a strong and permanent bond provided the surfaces are clean, dry and free of oil and grease. Clean the tread surface and lightly sand then wipe with a solvent damp rag to remove dust. Also wipe the back of the stair nosing and when dry apply the urethane mastic. Place the nosing in location and apply moderate weight to create a thin 'gasket' of adhesive. Allow 6 – 8 hours to cure.

As an alternative, you may use proprietary one piece masonry anchors. We recommend that a urethane mastic is also used under the Stair Nosing's to prevent bounce and chatter when the nosing is walked on. All fixings are available from **SAFETY STEP**. Where the existing stair tread has damage, it is recommended that a filler or bridge is formed under the stair nosing with urethane mastic to provide support.



Masonry Drive Anchor

MAINTENANCE

Stair Nosing's can be easily maintained to preserve the smart appearance and effective non-slip qualities.

Because of the extreme hardness and chemical resistance of Industrial Stair Nosing's, cleaning can be effected with medium pressure steam or water, degreasers and detergents. Stubborn soilage can be removed with a stiff deck broom. Strong solvents should be avoided as they may soften or discolour the FRP material. Do not use scrapers or wire brushes.

SLIP REISTANCE

The coefficient of friction (COF) is a number which represents the friction between two surfaces. Friction is of course the resistance an object encounters in moving over another, so when we quote a COF figure for our anti-slip products we are quoting the measure of our products ability to provide safe traction and thereby prevent slips and falls.

Different countries and indeed different agencies within a country adopt and rely on different testing apparatus to gain COF results. **Safety Step** has had test results produced from the three internationally most widely accepted slip meters:

- The Brungraber Mark II
- The English XL VIT
- The British Pendulum Slip Tester

Safety Step FRP industrial safety products have been tested with the above apparatus and found to comply with and exceed the requirements the following Standards:

- ASTM F1677
- ASTM F1679
- NFPA 1901
- DIN 51130
- AS/NZS 4586

RESISTANCE TO FIRE

Independent laboratory testing has confirmed that **Safety Step** FRP products will exhibit the following flammability characteristics:

- Rated Class 2, when tested according to BS 476, Part 7
- Rated self-extinguishing when tested in accordance to ASTM D 635
- Rated indices when tested according to AS 1530-Part 3, 1976

Ignitability Index	15
Spread of Flame Index	9
Heat Evolved Index	8
Smoke Developed Index	8



LUMINANCE DATA – GLOW PRODUCTS

Blended Strontium Aluminate pigment is the material included within **Safety Step** FRP products to cause them to glow in the dark. This material is non-toxic and non-radioactive.

The following chart maps the luminance decay of **Safety Step** glow in the dark industrial safety products. Luminance performance has been measured and charted from initial darkness to a condition of 0.3 milli candellas per square meter, the visibility threshold of the human eye.

The luminance measurements were made on the photoluminescent test samples with the ITS License Plate Test Apparatus.

The centre of each test sample was measured initially, after 5 minutes, after 10 minutes, after 30 minutes, after 1 hour and after 2 hours.

The aperture of the Pritchard Telephotometer was adjusted to achieve the proper measuring area (two inches diameter) on the test samples. The ITS License Plate Test Apparatus is traceable to the National Institute of Standards and Technology through the calibration of the Optronic Luminance Standard.

The test samples were exposed to 1,000 lux illumination from a 150 watt Xenon light source for 5 minutes immediately prior to the initial luminance measurements.

Product	Luminance measured in mcd/m ²						
	Initial	After 5 mins	After 10mins	After 30mins	After 60mins	After 120mins	Time to 0.3 Mcd/m ²
Strontium Aluminate	2,980	550	292	87	40	18	5,170