



THE WORLD'S FIRST FIXED POLYMER BARRIER



"As Manchester is such a busy airport, safety and security remain our top priority especially for staff out on the airfield where there are several vehicle and aircraft movements. Due to this, we require structurally sound and low maintenance barriers in place to protect our passengers and vehicles, which is what **A-SAFE** has supplied.

The process from initial contact to installing the barriers has been seamless and we have found the team to be very helpful with our requests."

Manchester Airport's Airfield Facilities Manager



WHO ARE A-SAFE?

A-SAFE was established in 1984, and we are a specialist manufacturer and supplier of high performance safety and protection barriers, and associated products. You might think that barriers and protection systems are just standard pieces of steel that will crumple when they get hit, and will need to be replaced. And a bit of floor damage will need to be repaired at the same time. Perhaps you'll also need to fork out for repairs to your vehicle too. But the A-SAFE Barrier system is different.



The Atlas Barrier is A-SAFE's specially designed airport protection system, which gives maximum safety which is vital at every airport. The flexible barrier, made from **Memaplex**, means that if they are hit by tug trucks or other vehicles, their built-in memory ensures that they spring back into shape, instead of bending or buckling. This, in turn, means that the floor is less likely to be damaged. The end result is a large-scale saving in maintenance costs and downtime, as damage repairs are cut to a minimum.

The **A-SAFE** range offers a number of products particularly well suited for airport applications. These include heavy-duty double rail

traffic barriers, bollards, pedestrian barriers and a purpose-designed barrier for damage prevention from tug trucks. They also effectively protect baggage halls, piers, charging units, floodlights, masts, buildings and general equipment, while providing efficient pedestrian/vehicle segregation.

A-SAFE's association with BAA and the supply of safety barrier products for Airport sites dates back to 2003. The initial contact was made by BAA with regard barriers to be used in passenger side and airport side baggage handling areas on the (then) new Terminal 5. As a result of this initial contact A-SAFE

redesigned and developed their existing Double Rail Traffic Barrier specifically for BAA. The result was the Atlas Barrier product designed to withstand the high impact loadings that would be caused by impacts from fully laden baggage tugs and dollies present in the baggage handling areas. All safety related products used on BAA Airport sites have to be BAA approved before they can be supplied and installed for the applications for which they are intended. The design criteria of BAA was such that the Atlas Barrier was suitable for installation and use for other applications in a variety of different areas on an Airport site. Subsequent BAA product approval has lead to **A-SAFE** products being supplied to Heathrow, Gatwick, Stansted; Manchester; Charleroi, Belgium; Frankfurt, Lanarca, Charles De Gaul, and Abu Dhabi.



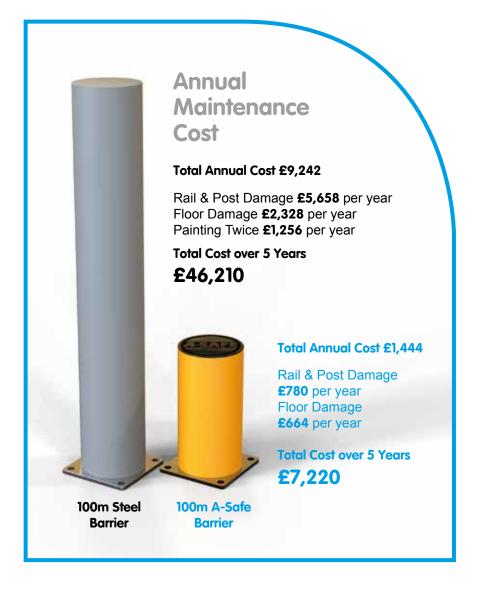
THE BENEFITS

One of the biggest benefits in choosing A-SAFE barriers is maintenance cost savings. As the graph shows, in comparison to steel you save a lot of money on maintenance in the first year, and vast amounts of money over five years.

Gatwick's savings

Gatwick airport were spending in excess of £100,000 annually in their north and south baggage handling halls on barrier and floor damage repairs.

In 2009 they replaced their steel barriers with **A-SAFE** products and in the period since, they have only spent approximately £3,000 on maintenance.





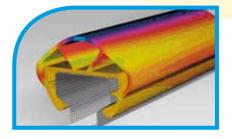
A-SAFE JOURNEY

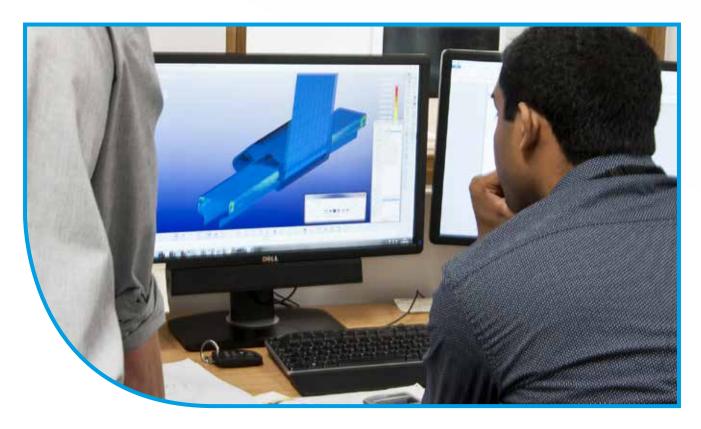
A-SAFE's expertise is second to none, and all products are designed, made and tested in their flagship HQ in England. Each product goes through its own journey from start to finish, before it lands on the shelf, ready go out to customers all over the world.

Research and Development

Using the latest FEA and physical testing, the highly skilled and innovative Research and Development team devise solutions and answer problems. The team takes in to account applications, vehicle weights, angles of impact, dimensions

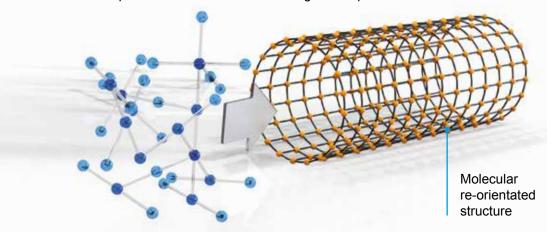
and material properties, before deciding on the appropriate product design for **A-SAFE** to develop. Each product is a project for our R&D team. And as **A-SAFE** products continuously evolve, no project can ever be considered to be completely finished!



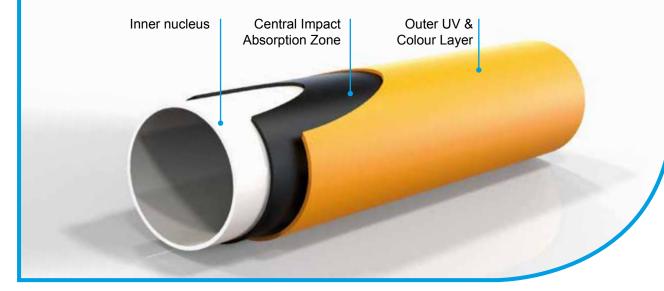


A-SAFE journey Forming the product

During manufacturing, the molecular structure is re-orientated in a straight line giving the material a built-in memory. This means that the product is flexible, absorbs and dissipates impact and repels the source of it. After impact the barrier returns to its original shape.



All of **A-SAFE's** products are made from **Memaplex™**, a robust and flexible polyolefin blend of materials with rubber additives. It's a three layered material that's exclusively manufactured by **A-SAFE**. Three combined zones, which has a make-up of eight blended polyolefin and rubber materials.





A-SAFE journey

Testing

The testing of the barriers is again done independently and in-house at **A-SAFE's** HQ. For your peace of mind the testing apparatus is certified by TÜV, and this means that you know that the barriers are tested to the highest possible standard.

We perform a pendulum test, and ensure that products comply with the latest Health and Safety standards and other applicable regulations. Where necessary they have been tested and certified as complying with impact loadings stated in relevant British, European and ISO standards.

We control the journey all the way – meaning that you choose **A-SAFE** with total confidence.

MEMAPLEX[™]

Memaplex Technical Overview

- Contains UV absorbers that protects the polymer.
- Contains no hazardous substances.
- Is not classified as dangerous.
- Has an ignition point of 360°C in the presence of a burner flame and 409°C in the absence of a burner flame. (At these temperatures the surroundings will have ignited.)
- Will not give off toxic or noxious fumes should it ignite.

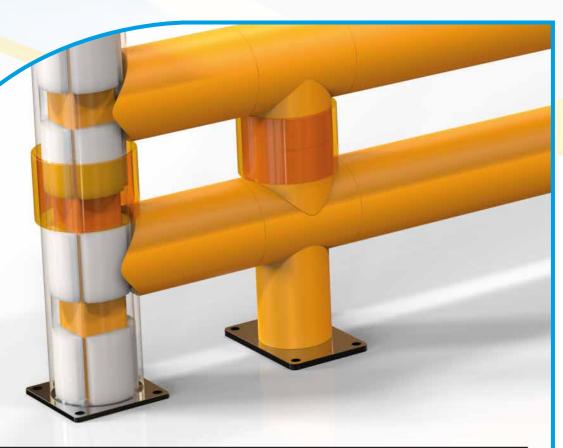


Product Specifications

Atlas Barrier







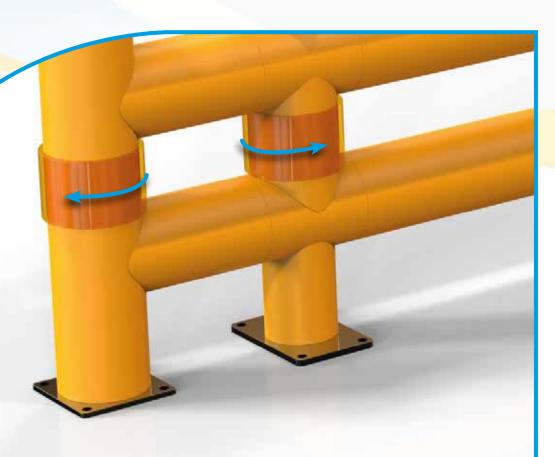
TECHNICAL INFORMATION				
Dimensions		Material Properties		
Standard Post Centres (mm)	1,600	Colour	Black, Yellow	
Rail Heights (mm)	310, 760	Memaplex Operating Temperature	-15°C to +50°C	
Fixing Anchor Size (mm)	20	Memaplex FR Operating Temperature	-40°C to +30°C	
Impact Loadings		Chemical Resistance	Excellent - ISO / TR 10358	
Tested impact energy (Joules)	24,300	Base Plate finish	Galvanised	
Equivalent vehicle weight (kg)	9,800	Fire Rating	НВ	
Equivalent vehicle speed (kmph)	8	Environment		
Angle of impact	90°	CO ₂ / m	50.82	
Standard Warranty 5 years*		Recyclability	100%	

^{*} Terms and conditions apply

Product SpecificationsAtlas Plus Barrier







TECHNICAL INFORMATION				
Dimensions		Material Properties		
Standard Post Centres (mm)	1,600	Colour	Black, Yellow	
Rail Heights (mm)	310, 760, 1100	Memaplex Operating Temperature	-15°C to +50°C	
Fixing Anchor Size (mm)	20	Memaplex FR Operating Temperature	-40°C to +30°C	
Impact Loadings		Chemical Resistance	Excellent - ISO / TR 10358	
Tested impact energy (Joules)	24,300	Base Plate finish	Galvanised	
Equivalent vehicle weight (kg)	9,800	Fire Rating	НВ	
Equivalent vehicle speed (kmph)	8	Environment		
Angle of impact	90°	CO ₂ / m	54.55	
Standard Warranty 5 years*		Recyclability	100%	
Standard Warranty 5 years Recyclability				

^{*} Terms and conditions apply

Product Specifications

Atlas Triangle







TECHNICAL INFORMATION			
Dimensions		Material Properties	
Standard Post Centres (mm)	1,250	Colour	Black, Yellow
Rail Heights (mm)	310, 710	Memaplex Operating Temperature	-15°C to +50°C
Fixing Anchor Size (mm)	12	Memaplex FR Operating Temperature	-40°C to +30°C
Impact Loadings		Chemical Resistance	Excellent - ISO / TR 10358
Tested impact energy (Joules)	48,600	Base Plate finish	Galvanised
Equivalent vehicle weight (kg)	20,000	Fire Rating	НВ
Equivalent vehicle speed (kmph)	8	Environment	
Angle of impact	90°	CO ₂ / m	97.81
Standard Warranty 5 years*		Recyclability	100%

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Product Specifications

Polygon (multi-sided protection)



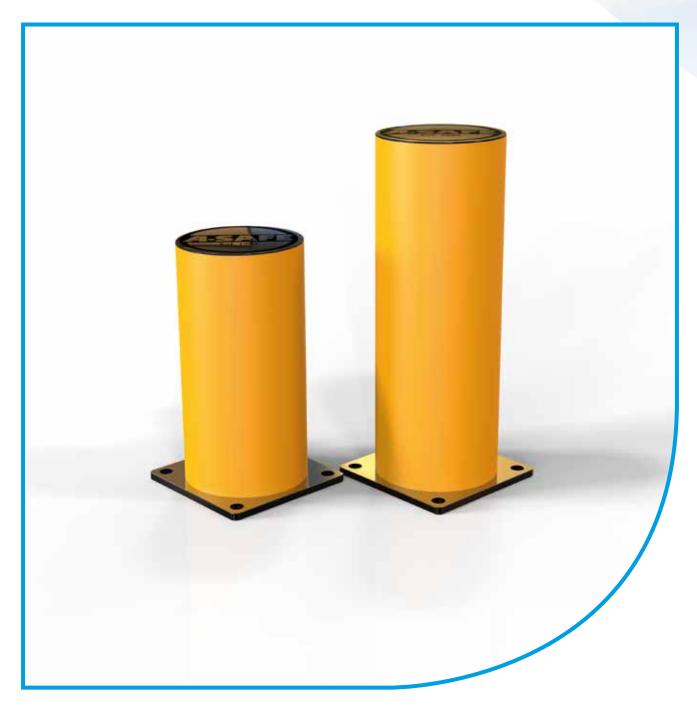




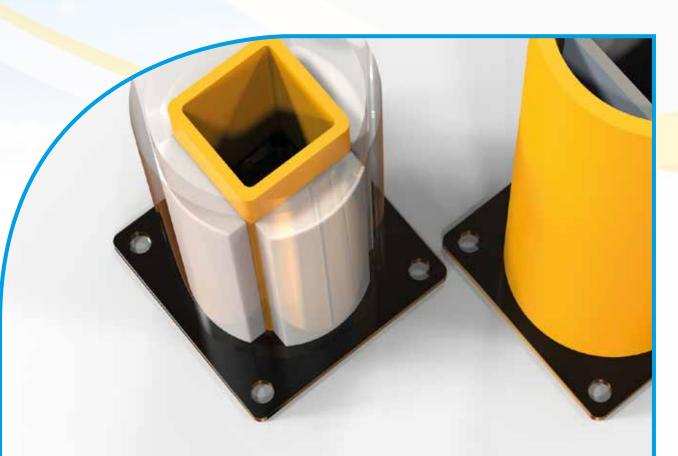
TECHNICAL INFORMATION				
Dimensions		Material Properties		
Standard Post Centres (mm)	800	Colour	Black, Yellow	
Rail Heights (mm)	310, 760	Memaplex Operating Temperature	-15°C to +50°C	
Fixing Anchor Size (mm)	20	Memaplex FR Operating Temperature	-40°C to +30°C	
Impact Loadings		Chemical Resistance	Excellent - ISO / TR 10358	
Tested impact energy (Joules)	32,000	Base Plate finish	Galvanised	
Equivalent vehicle weight (kg)	9,800	Fire Rating	НВ	
Equivalent vehicle speed (kmph)	8	Environment		
Angle of impact	90°	CO ₂ / m	76.23	
Standard Warranty 5 years*		Recyclability	100%	

^{*} Terms and conditions apply

Product Specifications Bollards







TECHNICAL INFORMATION				
Dimensions		Material Properties		
Standard Post Centres (mm)	N/A	Colour	Black, Yellow	
Rail Heights (mm)	760, 1200	Memaplex Operating Temperature	-15°C to +50°C	
Fixing Anchor Size (mm)	20	Memaplex FR Operating Temperature	-40°C to +30°C	
Impact Loadings		Chemical Resistance	Excellent - ISO / TR 10358	
Tested impact energy (Joules)	5,400	Base Plate finish	Zinc Nickel + Black Electrophoretic	
Equivalent vehicle weight (kg)	5,700	Fire Rating	НВ	
Equivalent vehicle speed (kmph)	5	Environment		
Angle of impact	90°	CO ₂ / m	38.35	
Standard Warranty 5 years*		Recyclability	100%	

^{*} Terms and conditions apply

Product Specifications

Pedestrian Barrier







TECHNICAL INFORMATION				
Dimensions		Material Properties		
Standard Post Centres (mm)	1500	Colour	Black, Yellow	
Rail Heights (mm)	550, 825, 1100	Memaplex Operating Temperature	-15°C to +50°C	
Fixing Anchor Size (mm)	12	Memaplex FR Operating Temperature	-40°C to +30°C	
Impact Loadings		Chemical Resistance	Excellent - ISO / TR 10358	
Tested impact energy (Joules)	1,900	Base Plate finish	Zinc Nickel + Black Electrophoretic	
Equivalent vehicle weight (kg)	2000	Fire Rating	НВ	
Equivalent vehicle speed (kmph)	4.8	Environment		
Angle of impact	90°	CO ₂ / m	16.46	
Standard Warranty 5 years*		Recyclability	100%	

^{*} Terms and conditions apply

Airport Application Floodlight Column Protection





Bumping in to a floodlight can mean a section of airport is out of action if it needs to be repaired. The flexible **A-SAFE** Atlas barrier solves the problem as it can be formed in to an appropriate shape to allowing it to fit around masts, columns and floodlights, to give full scale protection from passing vehicles.







Airport Application Pedestrian Segregation





Pedestrians need to be safe, and need to keep to walkways to stay out of danger. Various **A-SAFE** pedestrian segregation barriers are flexible, and separate pedestrians from traffic areas. It makes walkways clear to the pedestrian, ensuring they don't stray in to areas they're not supposed to go.







Airport Application

FEGP, Crocodile & Stand Guidance Protection





Expensive air-side equipment needs to be available and working at all times. An impact on these can play havoc with airport logistics. **A-SAFE's** Atlas Barriers are reliable and tough, and will protect this apparatus, removing the worries you might have when a vehicle is nearby.







Airport Application Door Protection





The **A-SAFE** Atlas Triangle barrier protects doorways from vehicles, and is especially designed to cope with airport trucks. It's tough, reliable, and flexible to ensure the vehicle, the barrier, the structure and the floor doesn't get damaged. It funnels a vehicle on the traffic side of the door, and a bollard protects the reverse.







Airport Application Baggage Conveyor Protection





Conveyors and other pieces of expensive baggage handling equipment are in close contact with airport vehicles, and are therefore vulnerable to being hit. Steel barriers cost a fortune in replacement and floor damage costs when hit, but **A-SAFE's** Atlas Barrier is especially designed for Airports, offers incredible protection, and dramatically reduces maintenance costs.







Airport Application Column Protection





Internally, columns form the structure of your building. One accident and a whole section of airport could come down, with catastrophic consequences. When airport vehicles are driving round at speed, columns outside and inside your airport are at risk. Column Protection from **A-SAFE** keeps your structure safe and sound, and helps to avoid potentially devastating accidents.







Airport Application

Wall Protection





You might think that your walls are invincible. They're not! They're an important but vulnerable part of your airport buildings. A collision with a vehicle can lead to disastrous consequences, so it's important to protect your walls. **A-SAFE's** flexible Atlas barrier not only stops vehicles crashing in to walls, it flexes too – meaning your vehicle, wall, floor and barrier doesn't get damaged in the process.







Consultation Assistance Project Management

Our team will come out to see you, and discuss your requirements at your site. We'll look at the areas you need to protect, make recommendations on the most appropriate type of barrier that we can offer, and take care of the design work as part of the quotation.





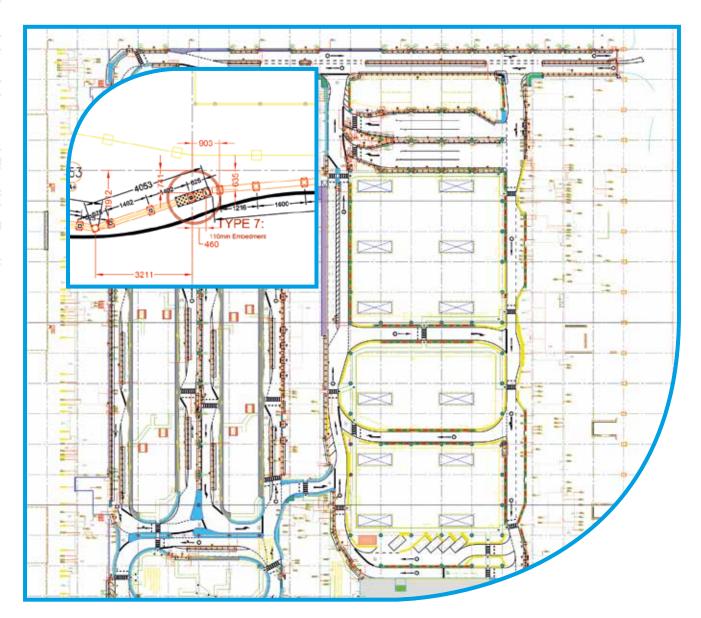
Consultation Assistance Working with Architects, specifiers, etc.

We'll liaise with anybody appointed to oversee the management and installation of safety systems. We'll offer exactly the same service level agreements, provided by our Head Offices and appointed partners throughout the world.



Consultation Assistance CAD Drawing

Our Consultation team will come back to the office and discuss your requirements with our design team. They'll turn your requirements in to full CAD drawings of your area and the proposed products, and they'll send them over to you for your approval.





Consultation Assistance

Installation Support

Our expert installation team, who are fully trained to the highest standards throughout Europe and the world, will come to your airport and fit your new **A-SAFE** barriers. The benefit of using **A-SAFE** installers is that, on average, they fit the product four-times quicker than your team can – due to their training and specially designed installation equipment.



Portfolio of projects Manchester

Terminals 1,2 & 3. Stand and apron protection, FEGP Protection, Crocodile Protection, Designated Walkways.













Portfolio of projects Gatwick

Floodlight Mast Protection.

Super MARS NW Zone, FEGP Protection, Gantry Legs & Stand Protection, SEGS Protection, Goal Post Protection, Power Unit Protection.





























Portfolio of projects Heathrow

T3 Western Interface Building, Baggage Hall Protection, External Protection.





























Portfolio of projects Heathrow

Terminal 1,3 Baggage Hall Protection, External Protection.





























Portfolio of projects Stansted

Designated Walkways, Pedestrian Segregation.





























Portfolio of projects Charles de Gaulle

Terminal E aile nord satellite 3, Terminal H lost luggage, despatch building entrance.













Portfolio of projects Frankfurt

Control centre baggage handling area Protection, Cargo area Protection.





Airport projects Completed

Gatwick Airport North Terminal Baggage. Gatwick Airport Piers. Gatwick Airport Stands FEGP Protection. Gatwick Airport Passenger Walkways.

Heathrow Airport T3 Western Interface Building. Heathrow Airport T3 Integrated Baggage. Heathrow Airport T2A. Heathrow Airport T2A Ancillary Building. Heathrow Airport T1 Baggage. Heathrow Airport T2B Lift Shafts. Heathrow Airport T4 ABF.

Heathrow AirportT1 Transitions.

Manchester Airport Terminals 1 FEGP, Crocodile Protection & Walkways.

Manchester Airport Terminals 2 FEGP, Crocodile Protection & Walkways.

Manchester Airport Terminals 3 FEGP, Crocodile Protection & Walkways.

Stansted Airport Cargo Loading Area. Stansted Airport CCTV Mast Protection. Stansted Airport Baggage Hall. Guernsey Airport Apron Protection.

Abu Dhabi Airport Cargo Warehouses 1. Abu Dhabi Airport Cargo Warehouses 2. Abu Dhabi Airport Cargo Warehouses 3.

Frankfurt Airport, Airport control centre baggage handling area.

Frankfurt Airport Cargo area.

Charles de Gaulle Terminal E aile nord satellite 3. Charles de Gaulle Terminal H, lost luggages dispatch building entrance.

Geneva Airport Luggage conveyor feed-in.

Dublin Airport T1 Baggage Hall. Dublin Airport T2 Baggage Hall.

Jersey Airport Airfield Building Protection.

Southampton Airport Building Protection.



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