



# OPERATION AND MAINTENANCE MANUAL

For steel door-sets  
including personnel doors, fire-exits, security,  
fire-rated and glass door-sets

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Assessed to BS ISO 9001:2015  
Cert. No.1542

# MAINTENANCE / REPAIR LOG

## Maintenance / Repair Log

Date:	Work carried out
Engineers Name:	
Date:	Work carried out
Engineers Name:	
Date:	Work carried out
Engineers Name:	
Date:	Work carried out
Engineers Name:	
Date:	Work carried out
Engineers Name:	
Date:	Work carried out
Engineers Name:	
Date:	Work carried out
Engineers Name:	

**FAILURE TO INSTALL, MAINTAIN THE DOOR CORRECTLY AND KEEP ACCURATE RECORDS WILL INVALIDATE THE MANUFACTURER'S WARRANTY**



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Your hinged steel door carries a warranty with us, however it is imperative that your door(s) and all its working parts are maintained correctly and in accordance with our instructions. Should you fail to maintain these instructions and retain accurate records, our warranty will become invalid.

These operating and maintenance instructions must be passed to the owner of the door and be read and understood by all personnel who will have reason to operate the door.

Life expectancy of steel doors is generally in the range of 10 years but is heavily dependent on the frequency of operation, the care taken when operating the equipment and that the doors are correctly maintained.

Provided that they are installed in accordance with our **Installation and Maintenance instructions** and in line with certified standard requirements, the doors are guaranteed for a 12 month period from dispatch. All hardware will come with manufacturer's standard warranty. Any free issue hardware is excluded from the Strongdor warranty.

Please see our **Terms and Conditions of Sale** for full details about the warranty we offer including conditions and restrictions.

### GENERAL SAFETY

- Keep openings clear at all times
- Do not lean ladders on the door leaf or frames
- Do not operate an obviously damaged or unsecured door. Ensure the damaged door is checked by a qualified Engineer as soon as possible
- Open and close the door using only the handles fitted.

### GENERAL MAINTENANCE

On a daily basis the user should ensure that there is no damage to any part of the door. Excessive force is not required to operate the door. Any damage to the door or excessive force required to operate the door should be reported and action taken to put the door back to good working order.

### LIMITATIONS OF USE

#### Personnel Doors

These are generally fitted with sash or dead locks or a combination of both with a cylinder and can be situated internally or on the external face of a building. The doors are designed for general entry/exit and may be supplied with a door closer or friction stay.

#### Fire Exit Doors

These are fitted with panic hardware and a door closer and may be situated on internal corridors or on the external face of a building. The doors are designed to be kept closed and used in the event of an emergency. Under these circumstances they should be used infrequently.

Whilst some of these doors may be fitted with an external

access device, they are designed to allow limited access; they are not designed as main access doors and should not be used as such.

#### Fire Rated Doors

These doors can be fitted with a variety of certified hardware, some with panic and some with latches only. All fire doors must be fitted with door closers to comply with fire safety regulations. Double doors will be fitted with selectors to ensure that they close in the correct sequence. As they are fire resisting doors it is important that they are kept closed. These doors would be classed as medium use doors.

#### Security Rated Doors

Our security doors are accredited, offering an enhanced certified level of security. These doors can be fitted with a variety of hardware options.

### MAINTENANCE INFORMATION

There are a number of components on the door sets which should be maintained on a regular basis. We would recommend that the doors and their associated hardware are maintained on a **QUARTERLY BASIS**.

To ensure the best operations of your door and its parts, we recommend the following -

#### Door Leaf

The door alignment should be checked regularly, ensuring the door leaf is not scraping the ground and has optimum clearance. The door should be free of dents and scratches and should open freely.

Door openings should be kept clear of obstructions (internally and externally) to ensure that the door operation is not impeded. The locks and/or panic hardware should be checked to ensure smooth and correct operation.

#### Hinges

The hinges should be inspected periodically for wear that may inhibit the free movement of the door and cause the door to drop. Loosening of the hinges is usually caused by misalignment or by screws coming loose. Loose screws should be tightened and if possible the problem eliminated by realigning the hinges or replacing the screws.

Any dark marks or stains around the hinge knuckle could indicate wear and impending failure, meaning the hinges should be replaced as soon as possible.

Hinges are supplied already lubricated by the manufacturer but should be lubricated as appropriate.

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## MAINTENANCE INFORMATION

### Door Closers & Friction Stays

Overhead door closer internal parts are immersed in oil and require little maintenance. However, each closer should be inspected for oil leakage, tightness of fixings and correct operation. Light lubrication should be applied to any exposed pivot points.

Open the door fully and ensure that the door closes smoothly and firmly against the frame overcoming any latch or door seals fitted. If it does not, make sure that the lock and hinges are fitted correctly before adjusting the closer. To avoid slamming, the latch action should be adjusted. Where back-check or delayed action functions are incorporated, these should also be checked and adjusted.

Ensure that doors are not being wedged open.

Adjustable closers should have their valve adjusted to take account of size of door, variable air pressures and the ability of the user to operate the door. It is recommended that door stops be fitted to all non-back-check applications to prevent the door opening beyond the limit of the closer.

Limit stays should be examined for tightness of fixings and wear at the pivot point bearing. Lack of friction will require the pivot retaining nut to be adjusted to give the required friction.

Door stays equipped with a cushioning spring should have their fixings checked for tightness and the open position catch/operation of the buffer spring checked.

Friction stays - this type of stay is designed purely to prevent the door from being opened past 90 degrees, it has no cushioning ability and needs to have the friction pivot adjusted accordingly. Location and climate must be taken into account when adjusting the resistance level of the friction stay. Failure to correctly tension the stays will result in the manufacturer's warranty being invalid.

### Electro Magnetic Devices

Any electrical locking or hold open devices and their associated alarms should be checked regularly and release immediately when power is removed.

### Locks and Latches

Various locks including multi point locks, sash locks, deadlocks and high security locks are fitted across different applications. The correct operation of a lock or latch, assuming correct fitting, is often affected by movement of the door or frame caused by climatic conditions or wear on hinges.

The usual result is the inability of the latch and any deadbolts to easily engage their respective striking plates or keep,

requiring an adjustment to their position on the frame. The mortise should also be checked to ensure that no debris has entered the lock case.

It is also important that the holes in the frame behind striking plates are deep enough and free from foreign matter to ensure unrestricted movement of the bolts. Lubricant should occasionally be applied to the sides and striking face of latch bolts. Lubricants should not be applied to the internal lock mechanism as this will attract dust.

### Cylinders

Cylinders should not be lubricated as this attracts dust and can affect their smooth operation.

### Lever Handles

Back plate, rose and escutcheon fixings should be periodically checked for tightness and adjusted if found loose. Badly fitted and maintained furniture can prevent the lock from operating correctly. Spindle grub screws should also be checked and tightened.

### Pull Handles

Pull handles should be inspected to ensure that fixings are tight. Loose pull handles can damage the door face or lead to access through a door.

### Emergency and Panic Escape Hardware

In the interests of safety this hardware should be regularly inspected and maintained.

Attention must be given to ease of opening and closing with adjustments as necessary to compensate for any door or frame movement. Floor sockets/locations should be cleaned out to prevent foreign matter impeding the action of the bolt movement.

Lubrication should be limited to the pivots of the top latch mechanism and to the saddles of panic bolts and the bolt head of panic latches.

### Spring Loaded Bolts and Flush Bolts

Double door passive leaves are secured in place with either spring loaded bolts or flush bolts mounted flush in to the passive leaf. All double doors have flush bolts mounted at both the top and the bottom of the passive leaf. Maintenance of these items involves a light application of lubricant and a check that all fixings are secure.

### Threshold and Door Seals

Threshold and door seals should be inspected for signs of damage and to ensure they are still securely in place.

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## QUARTERLY MAINTENANCE

You should be able to demonstrate a strict documented quarterly cleaning regime with regard to door surfaces.

A qualified service engineer should carry out the service and maintenance in accordance with the recommended service frequencies.

### 3 Monthly / Quarterly Checks

- Check door alignment to ensure that door and frame are correct, with no signs of movement in fixings
- Check door closers for correct operation and no signs of oil leaks
- Check lock and access control for correct operation
- Check security of flush bolt mountings
- Check security of hinge fixings
- Check door seals are present and in good condition
- Lubricate hardware if necessary
- Ensure doors are fully washed down with warm water and mild detergent.

### 12 Monthly / Annual Checks

All of the quarterly checks plus service locks by checking and lubricating latch and any moving parts.

## CLEANING

Dirt and dust are the main causes of corrosion in metal door furniture, particularly when combined with moisture in a damp atmosphere. In hardwearing environmental conditions near the coast, industrial areas, or on some construction sites, acidic or alkaline deposits may build up and attack the surface finish.

### Cleaning Coated Surfaces

Cleaning should start at the time the products are installed, ensuring that construction materials such as concrete, plaster and paint splashes are removed before they have a chance to dry. Failure to remove these materials at this early stage will require the use of aggressive cleaning materials and techniques with potential damage to the powder coated surface.

### Method of Cleaning

The best method of cleaning of Interpon D products is by regular washing of the coating using a solution of warm water and non-abrasive, pH neutral detergent solution. Surfaces should be thoroughly rinsed after cleaning to remove all residues. All surfaces should be cleaned using a soft cloth or sponge or nothing harsher than a soft natural bristle brush. Cleaning of powder coated sections can be conveniently carried out at the same time as window cleaning. If the project is subject to any hazardous unusual environmental factors, or is close to salt water, an estuary or marine environments then Akzo Nobel must be consulted on an individual project basis.

Renovation can be required in the case of heavy soiling (due

to lack of maintenance). It is then recommended to consult a specialized company.

### Cleaning Products

Before cleaning, attention must, without exception be paid to the cleaning agent's datasheet. The following guideline from GRM in Germany is also very useful and informative: and the applicable guidelines of the various associations:

[http://grm-online.de/fileadmin/user\\_upload/pdf/Neue\\_GPB/GPB\\_632\\_DB\\_Englisch.pdf](http://grm-online.de/fileadmin/user_upload/pdf/Neue_GPB/GPB_632_DB_Englisch.pdf)

Usual maintenance can be done using water with mild detergent (pH 5 to 8).

If the atmospheric pollution has resulted in heavy soiling of the coating, some stains or marks may require stronger domestic products. In such cases, they should always be diluted, and small inconspicuous test areas cleaned first. In no circumstance should any abrasive cleaner or polish, or any cleaner containing ketones, esters be used.

### Chemical Cleaners

The cleaning solutions used on both brick and concrete contain strong chemicals that can cause damage to the powder-coated surface. All exposed powder-coated surfaces should be fully protected.

If any such solutions or chemicals come in contact with the powder-coated surface, wash immediately with copious amounts of water.

Prolonged exposure can cause discolouration of the film, loss of gloss and damage to the coating surface.

### Abrasive Blasting

The cleaning of concrete or brick by using abrasive shot blasting must be carried out in such a way that all structures coated with powder coating must be fully protected.

The abrasive medium will strip the powder coating from the metal substrate. Only protective tape with a low tack and approved by the suppliers of the protective tape for use on powder coatings should be used.

## POWDER COATING MAINTENANCE

As advised by powder coat supplier, powder coated finishes should be cleaned using warm water with a mild household cleaning detergent. Clean soft cloths should always be used to avoid scratching and damage to the powder coat finish.

**DO NOT** use any chemical solvents, bleach, abrasive cleaners or any industrial solvents, as this will affect the paint finish.

**VERY IMPORTANT:** if your door has been painted with the prime under coat, it is important that any damage is repaired, restoring the door back to the original level of finish. This should be carried out at the time of damage, and not left until the **QUARTERLY** check.

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# POWDER COATING MAINTENANCE

## Protection During Construction

### Low Tack Tapes

Such tapes are usually applied to the coated surface during fabrication. Clear tapes should be removed after a period not exceeding three months. If further protection is required new tape should be applied. Tape should be applied and removed as recommended by the tape supplier.

Any residue from the tape should be removed as soon as possible.

Do not use scrapers, abrasive papers or similar items to clean the area as this may damage the surface of the powder coating.

Water and a small amount of mild detergent may be used to clean the surface of the powder coating.

Where it is absolutely necessary a small amount of white spirit may be used followed by cleaning with water and mild detergent.

Do not under any circumstances use strong solvents or solutions containing:

- Chlorinated Hydrocarbons
- Esters
- Ketones
- Abrasive cleaner or polish

### Plastic Wrapping

Coated parts are often shrink-wrapped in plastic to prevent weather or mechanical damage during transport and storage. The atmosphere within the packaging naturally contains moisture reflecting the humidity levels prevalent at the time of packing. If the wrapped parts are kept outside in sunlight, rapid temperature build-up can occur resulting in a softening of the coating film and potential for ingress by moisture, creating a whitening effect of the blanching. This can be reversed on further heating of the part, but is best avoided by storing parts out of direct sunlight.

### Powder Coating Frequency of Cleaning

The frequency of such cleaning will depend on many factors including:

- The geographical location of the building
- The environment surrounding the building, i.e., marine, swimming pool, industrial, or a combination of these environments
- Levels of atmospheric pollution
- Prevailing wind
- Protection of the building by other buildings
- Possibility of airborne debris (e.g., sand/dust etc.) causing erosive wear of the coating

- If the environmental circumstances change during the lifetime of the building (e.g., rural becomes industrial)

- The powder coating chemistry, for example:

### Standard polyester (Interpon D1000 type) – more regular cleaning

The frequency of cleaning depends in part on the standard of appearance that is required and also the requirements to remove deposits, which could, during prolonged contact with either the powder film or the metal substrate, (if exposed) cause damage.

Sheltered areas can be more at risk of coating degradation than exposed areas. This is because wind-blown salt and other pollutants may adhere to the surface and will not be cleaned away with rainfall. These areas should be inspected and cleaned if necessary on a more regular basis.

Records of all cleaning schedules and frequencies shall be kept and maintained and made available to Akzo Nobel if requested.

The manufacturers cleaning frequency specifications are shown below:

Environment	Location	Frequency
Inland		Quarterly
Marine - Coastal	2000 - 5000m from coastline	Quarterly
	500 - 2000m from coastline	Monthly
	200 - 500m from coastline	Monthly
	Less than 200m from coastline	N/A
Industrial - Coastal	2000 - 5000m from polluton source	Quarterly
	500 - 2000m from polluton source	Monthly
	200 - 500m from polluton source	Monthly
	Less than 200m from polluton source	N/A
Swimming Pool	Greater than 10m from edge of pool 10m from edge of pool	Monthly N/A

\*If an location's frequency of cleaning is N/A, this is due to the location not being recommended.

### Nickel and Chrome

Door furniture with nickel and chrome finishes should be dusted regularly. They should be washed periodically with weak detergent solutions and rubbed occasionally with a cloth dampened in paraffin or light oil.

### Stainless Steel

Stainless steel should be dusted regularly, occasionally washed with warm soapy water and dried with a soft clean cloth. Avoid acid or chloride based cleaning products and abrasive materials.

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## ADDITIONAL FIREDOR MAINTENANCE

According to the Article 17 of the Regulatory Reform (Fire Safety) Order 2005 (RRO/FSO), it is a legal requirement to ensure that fire resisting doors and escape doors are correctly installed and adequately maintained in order for them to be fit for purpose. The authorities have the power to enforce the RRO/FSO and do prosecute or even close buildings down where breaches are discovered. Building owners need 'responsible persons' as referenced in the Fire Safety Order to help them comply with fire door regulations.

### Frequency of Inspection

- Periodic checks should be carried out at least once every six months.
- Newly occupied buildings may require more frequent checks in the first year of use.
- Doors where traffic is high are likely to be more susceptible to damage and should be checked more frequently than other doors in the building. E.g. once per week/month (depending on usage).

## ADDITIONAL SECURIDOR S2-1 MAINTENANCE

### Quarterly Maintenance

1. HINGES and ALL working parts MUST be lubricated.
2. Check door leaf and frame for damage.
3. Check the door leaf alignment. Ensure door leaf does not scrape the ground and has an optimum clearance of 6mm.
4. Check locks, cylinders, latches, handles, panic hardware, closure, friction stays and any other ironmongery for loose fixings, smooth operation and security. Retighten or lubricate if necessary.
5. Cylinder should only be lubricated with either Teflon or Graphite based oil.  
WD40 or similar penetrative oil must not be used.

**ALL IRONMONGERY NEEDS TO BE REGULARLY CHECKED. FAILURE TO DO SO WILL VOID THE MANUFACTURERS WARRANTY.**

### Maintenance of Ironmongery

#### Hinges

Check that there is no visible wear on the hinge. Any dark marks or stains around the hinge knuckle could indicate wear and impending failure, meaning that the hinges should be replaced as soon as possible. Hinges must have lanolin applied every three months.

#### Door Closure Devices / Friction Stays

Check that the door-closing device is operating correctly. Ensure that the doors are not being wedged open. Open the door fully and check it closes without binding on the floor. Open the door to approximately 30 degrees and check it closes correctly. Open

the door approximately 5 degrees and again check that it closes fully, overcoming any latch or seal. Check door-closing speed to be approximately 10 seconds from 90 degrees and ensure that the door does not slam. Adjust speed as necessary.

**FRICION STAYS** must be checked and tensioned when fitting the doorset. Location and climate must be taken into account when adjusting the resistance level of the friction stay.

#### Locks, Lever Handles and Cylinders

Check that the levers fully return to the horizontal after use and that the latch bolt is engaging smoothly and completely into the strike. Wipe any metal dust deposits off the latch bolt and strike plate. Check cylinder throws the latch / deadbolt smoothly into receiver. Adjust, tighten or lubricate as required.

#### Access Control Systems

A requirement for any access control systems to have a minimum of 5000 different codes to meet the B3 (SR2) requirement in LPS 1175.

If a 'push to exit' push button is to be installed for access control it has to be installed at a minimum of at least 1500mm away from the door set.

#### All Ironmongery

Make sure that all fixings are secure. Make sure hinges, closers, friction stays, locks, and any other hardware are lubricated / maintained at the required intervals. Seal **MUST BE FITTED** correctly to door frame. Our tolerances are calibrated for OUR seal only.

#### General Maintenance

To ensure safe, reliable operation regular inspection and maintenance is essential.

The frequency of maintenance depends on the amount of use.

Door cycles per day	Recommended Inspection and Maintenance periods
Up to 15	Every six months
Up to 30	Every four months
Up to 40	Every two months
Up to 50	Every five weeks
Over 50	Every two weeks

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