

sapa:

buildingsystem

ARCHITECTURAL ALUMINIUM SOLUTIONS



Maintenance Information

Technical Data Sheet

Sapa Building System

Cleaning Information

It is said that the last person to touch a window or door has the greatest influence over its performance. Whilst this may be true in the short term, a product's lifecycle can be prolonged by regular and correct maintenance. This may take the form of lubrication, cleaning or adjusting by trained personnel and may vary according to the location, use and environment of the finished building.

Here we highlight the key elements of our products that require care and attention. We have consulted with the major manufacturers of hinges, handles and hardware to create this comprehensive (but not exclusive) guide. For further information or clarification, please contact either us or the manufacturers directly using the links listed on the back page of this brochure.

All Sapa products are finished to the highest specifications and in accordance with the relevant British Standards for Painted and Anodised surfaces.

Installation/Post Installation

Mortar, plaster etc. must be immediately removed from all painted or anodised surfaces by washing down with warm water containing a mild detergent, taking care not to scratch the surface. Stubborn marks may be carefully tackled with a renovating cream and non-abrasive cloth. It is recommended to test on a hidden or inconspicuous area first to ensure satisfaction with result.

On no account are Alcohols, Esters or Ketones or other Organic solvents to be used, nor are polishes containing hard abrasives.

Modern powder coatings applied to architectural aluminium are similar to the types used on motor vehicles and therefore require the same degree of care and attention that people typically lavish on their car bodywork. The frequency of cleaning relates directly to the decorative standard that the householder wishes to maintain and also the particular environment where the units are situated.

Hinges and locking mechanisms should be inspected to ensure they are free from any debris that might affect their performance. Moving parts should be lubricated with the appropriate product as given on the next page.

Ongoing Care

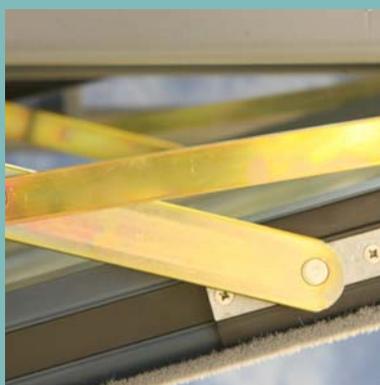
All products should be washed down with warm water containing a mild detergent at least once a year. In areas where airborne contaminants are more concentrated than usual - near the sea, around swimming pools, or in place where industrial air pollution is a known hazard - the products should be cleaned every three months or more frequently if requested by the powder coat manufacturer for that specific location.

Painted surfaces that become marked should be treated as above. Scratches or chips may be touched in by brush using a colour matched paint - Sapa can supply small bottles of paint to match the stock colours it uses ie RAL9910 Hipca White, BS08B29 Van Dyke Brown and RAL9005 Black. Cleaning and maintenance must be carried out in accordance with the powder coat manufacturers' specification

Anodised surfaces that have become heavily contaminated may be restored by gently rubbing them with a 'Scotchbrite' pad then drying off with a soft cloth. Application of a lanolin based cream after cleaning will give added protection.

Foiled surfaces may be touched up using the correct pens available from Sapa Building Systems Limited.

Routine Maintenance & Trouble Shooting



Routine Maintenance

The hardware fitted to Sapa products does not need 'calendar' servicing but should be maintained on an 'as necessary' basis. Thus items such as door locks, friction hinges, and reversible window gear which have been lubricated in manufacture and/or installation should be treated with the appropriate lubricant when they show signs of stiffening up in use or they have been left unused for a considerable time.

A list of appropriate lubricants is given below:

Hinge pivots, Handles, Locks	Light Machine Oil
Hinge channels	Vaseline
Cylinder Locks	Graphite or PTFE based Lubricant
Vertical Sliding Window Balances (VSW)	Torso - Castrol RustiloDWF Others - Multipurpose grease

When cleaning the products it is a wise precaution to check that all hardware fixing screws are tight, connections between VSW balances and sashes remain correct, safety stops/catches/latches are in place, and that all parts are free from damage.

At the same time, and at least annually, make sure that drainage paths are not blocked by airborne debris or other 'foreign' bodies.

Trouble Shooting

Intermittent operation or sudden unexplained impairment of the functioning of any item of hardware should be investigated **immediately** by a person familiar with the product **and repairs effected before user safety or product function is jeopardised.**

Replacement of faulty or damaged parts should be carried out by an experienced person using the correct parts.

Where an item is still covered by the warranty given by the fabricator or installer of the product requests for remedial work under such guarantees must, in the first instance, be referred to that person or company.

Handles



HOPPE brand fittings are made of the best quality base materials. The surface is protected from corrosion either by transparent lacquer, anodising and electro-plating such as chrome-plating or by a special vacuum-coating process. Surfaces protected by chrome-plating or vacuum-coating have a high scratch resistance.

- HOPPE material finishes require no special care. Dirt can be removed with a damp cloth; use of caustic and abraive cleansers should be avoided
- Selected items from the HOPPE hardware range carry a 10 year surface guarantee. They are therefore suitable for coastal areas and highly frequented areas such as public buildings, shops and hotels. Please contact HOPPE direct for further details
- All products with the Resista surface guarantee have undergone continual quality testing and, when new, conform to the requirements of the corrosion standard BS EN 1670

Care: Dirt can be easily removed with a damp cloth. The use of caustic cleansers or chemicals should be avoided.

- Handles should not be over tightened as this may impair the operation of the espagnolette, shoot bolt, lock or tilt 'n' turn mechanism
- Casement fasteners and stays should not be over tightened as this may split the timber frame
- All handles should be lightly lubricated twice per year and cleaned with a soft damp cloth to remove any dust or gime, taking care not to scratch the surface
- Lightly lubricate (twice a year) with a light machine oil between the handle and the backplate
- Only clean the handle with a soft damp cloth

Hinges



- Ensure the selection of the correct size of hinge to be installed to support the frame size and weight as detailed in the relevant brochure
- Using an appropriate fixing jig will ensure a positive location for the hinge
- Fixings should be corrosion resistant screws taking care not to over tighten
- All pivot points should be lightly lubricated twice per year, fixings checked and the sliding channel wiped with a clean cloth

Environmental Constraints

Normal operating conditions for all hinges are:

- Operating temperature range -20°C to $+60^{\circ}\text{C}$
- Operating humidity range 10% Relative Humidity to 95% Relative Humidity

The materials used will not degrade due to ultra violet light, or when using neutral acidity non solvent cleaning chemicals, at a rate faster than other parts of the window assembly. However, the practice of cleaning brickwork with acidic based products will have serious effects if allowed to come into contact with hardware. Corrosion or failure of hardware as a result of this practice will not be covered by the warranty issued on such products.

For further advise on procedures for protecting the window during this operation, please contact the window manufacturer or hardware supplier.

Hinges



Maintenance and Lubrication

As with most mechanical devices, hinges require periodic maintenance and lubrication. The hinge in general and particularly the pivots, sliding shoe and track must be kept free from dirt, debris and any obstructions at all times.

At Time of Installation - Lubricate all pivot points with light machine oil and wipe away excess, one drop per pivot is sufficient. We suggest one of the following lubricants or equivalent:

- General light engineering oil with corrosion inhibitors such as Castrol Everyman or 3 in 1 oil (available in aerosol can for convenience). **Note:** Solvent based aerosol sprays e.g. WD40 are **not** suitable for this application

Every Five Years - Carry out the following checks every five years:

- Clean any dirt or debris from the hinge and clear any obstructions from the pivots, sliding shoe and track
- Apply lubrication detailed above
- Check the tightness and security of all fixing screws and rivets

Corrosion Resistance

When subjected to the relevant neutral salt spray test to BS7479:1991/ISO9227:1990 the hinge remains functional, there is no significant surface pitting caused by corrosion. Some surface discolouration is to be expected.

If a hinge is fitted in an area where it is exposed to a corrosive atmosphere, e.g. salt laden sea air in coastal locations, we recommended that in addition to the general maintenance and lubrication:

- All metal surfaces are lightly coated with lubrication oil or sprayed with a proprietary anticorrosion spray. It is important to follow the manufacturer's instructions for any products used
- Maintenance operations may need to be carried out more frequently. This is dependent on the severity of the prevailing conditions
- If conditions are severe (e.g. salt laden sea spray) it would be advisable to specify Auestentic (304) stainless steel

Hinges



Maintenance of Fittings

All building parts and components must be given periodic maintenance. This also applies to the fittings.

All moving parts must be kept lubricated, use either white neutral grease (vaseline) or neutral oil e.g. sewing machine oil or Gleitmo 300.

Gliders and aluminium slide rails must be kept free of dirt. The relevant fitting instructions should be followed with respect to lubrication and maintenance.

Hardware should be maintained regularly and the frequency will depend on the environment and weather conditions. It is recommended to lubricate as a minimum once a year. Attention must also be paid to other factors leading to corrosion, for example the effects of caustic fluids, air pollution, etc. Fittings used in large towns, industrial atmosphere, or salty air require special attention due to the greater corrosive effects. The frequency of lubrication and maintenance should be more regular than fittings used where the corrosive effect is less.

Note that gliders and slide rails as well as rivets have to be lubricated. However it is not recommended to lubricate friction parts since this will reduce the friction.

Note that damage to the surface treatment may occur when using tools on mounted fittings. Brass products will also be affected by corrosion. To maintain the original colour, parts have to be polished regularly. Stainless steel can also be affected and spots that look like rust can be removed by using a stain remover and polish.

Lacquered fittings are maintained by paint according to the instructions of the paint and colour manufacturer.

Anodized aluminium is cleaned at least once a year. It is recommended to polish the surface with a cloth or sponge. Only neutral solvents and non-scratching material can be used.

Restrictors

Where restrictors are supplied either as an integral part of the hardware or as a separate component as specified, it is essential that the restrictor functions correctly.

After installations the windows must be checked for function and all restrictors and reverse catches should limit the opening or closing of the window. Initial restrictors must hold the window at approx 100mm max and automatically engage and reengage when operated (Side Swing - Top Swing).

Areas with High Corrosive Effect

Please be aware of special areas i.e. coastal or industrial areas, etc.

The contents of salt, acid etc. in the air can be so high that metal parts require frequent maintenance and lubrication

Other Hardware



As with any architectural product, the frequency of operation and the environment of the application will influence the frequency of maintenance. A corrosive environment such as swimming pool, close proximity to the sea as well as high usage will mean that the hardware will require the maintenance interval to be increased from annually to biannually. In all situations it is important to consider the application as a whole rather than just the emergency escape device. Therefore the door and all of its hardware should be inspected, as part of the maintenance procedure to ensure that they are performing satisfactorily.

Monthly

- Operate the emergency escape device to ensure satisfactory operation i.e a clean release of the locking points as the bar is operated, unimpeded opening of the door and the successful engagement of both locking points as the door closes. This should occur on each operation.
- Ensure that the strike plate is free from obstruction

Annually (biannually for high traffic and corrosive conditions)

- Carry out normal monthly checks
- Remove the cosmetic end cap from the locking stile end of the bar and check that the screw retaining the crank onto the vertical rod mechanism is securely fastened.
- Check all other fixing (including the header strike) are securely fastened
- Lubricate with high grade, lithium based grease the top of the square bolt where it bears against the stop plate on the actuator of the top bolt actuator assembly.
- Lubricate all other moving parts with grease that is silicone-based.

Other Hardware



Caldwell Balance Warranty Maintenance Schedule Spirex, Spiralift, Alumalift Heavy Duty and Regular Ultralift and Torso Balances

The sash balance units are lubricated during the production process and are designed to be self-lubricating during the operation of the window sashes. Therefore, the balances only require a minimum of maintenance but the following is recommended:

The windows must be cleaned at regular intervals. The cleaning process should include the frames and any drainage channels that are provided (please refer to window manufacturers instructions). The balances should be checked during this cleaning process and the following items observed:

- Check the balance fixing screw is secure but still allows the balance to swivel freely about the fixing screw
- Check that the bottom fixing bracket is secured to the sash and not damaged or distorted in any way
- Check that the cross pin in the spiral is correctly seated in the fixing bracket, (Spirex/Spiralift balances only)
- Check that the top roll pin in the spiral is engaged in the pivot shoe, the bottom roll pin is for adjustment only, (Heavy duty and Alumalift regular balances only)
- Is the balance tube damaged in any way?
- If dirt and debris has built up at the bottom end of the balance, it can be cleaned with a cloth and re-greased with the following:

Torso balances: use Castrol spray Spherol AP2

Spirex/Spiralift and Ultralift balances: multi-purpose grease can be used and we suggest that the brackets are coated at the same time

Alumalift regular, heavy duty and Ultralift balances: multi-purpose grease can be used and care should be taken not to contaminate the pivot shoe or the slide channel

- Check that the travel stops are in place, and that the sash moves to contact the travel stop without any undue force. This will ensure the balances are not being either over extended or crushed. Finally check for smooth running of the sashes and adjust balances if required, (please note Torso balances are non adjustable)

Other Hardware



For door closer systems with hydraulic damping (overhead door closers and floor springs)

Regular inspection and maintenance of the door closer by suitable specialist firms is one of the main prerequisites in satisfying the correct usage/correct practice requirement. The closer manufacturer considers the following to be necessary in this respect:

- Regular inspection of safety relevant components of the door closer to determine correct location/fit and the extent of any wear which may of taken place
- Checking of the settings governing closing speed etc
- Checking for ease of door operation
- Checking of fixing screws to ensure they are tight and secure
- Compliance with the prescribed statutory/legal inspection, monitoring and maintenance activities, in the case of door closers with special functions (hold open devices, mechanisms and systems)

The scope and frequency of maintenance measures such as these will depend on the type and use of the swing doors concerned. Under conditions of average usage, the manufacturer considers door closer maintenance to be necessary at least once a year.

- All moving parts should be lightly lubricated using a light non-acidic mineral oil twice per year and the surface cleaned with a soft damp cloth
- The product may need to be adjusted and fixings tightened to ensure satisfactory operation

Other Hardware



Locking Mechanisms & Multi-Point Door Locks

- End guides and screw bushes should not be over tightened to impede the smooth operation of the bars
- Final adjustment should be made upon installation to ensure positive engagement of bars or rods into keeps
- The use of the correct sealing gasket will enhance the weather sealing and operation of the lock
- All parts should be lightly lubricated twice per year and surfaces wiped with a clean cloth

Care & Maintenance Instructions

To ensure that your window espagnolette functions correctly, it is important that the following maintenance procedure is carried out at least once a year:

- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary fixing screws should be tightened by a suitably qualified person
- All handles and locking mechanisms must be lubricated
- Ammonia based and abrasive cleaning fluids should not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings

A few tips to keep your Yale lock working smoothly:

- Use 3 in 1 oil periodically on all rivet and compression roller points
- Keep faceplate & keep surfaces clean from dust by wiping with a damp cloth

Finishes



Cleaning & Maintenance

Powder Coatings are organic coatings that need to be cleaned and maintained regularly to ensure that the decorative and protective properties of the coating are retained. The frequency of cleaning depends upon the environment in which the coating is in service.

Cleaning of the coating is an important part of the routine maintenance of any building. It is for this reason that we advise that only companies who specialise in this type of work are used for large cleaning operations.

The best method of cleaning is by regular washing of the coating using a solution of warm water and mild detergent. All surfaces should be cleaned using a soft cloth or sponge, using nothing harsher than natural bristle brushes (Cleaning of window sections etc. can be conveniently carried out at the same time as glazing cleaning).

If the atmospheric pollution has resulted in heavy soiling of the coating, then nothing harsher than white spirit should be used for cleaning. Do not under any circumstances use strong solvents or solutions containing chlorinated hydrocarbons, esters, ketones, abrasive cleaner or polish.

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

In hazardous environments the normal frequency of cleaning should be at a maximum of three monthly intervals. However where there is high atmospheric pollution or an extremely hazardous atmosphere (i.e., a combination of factors above or others) the period between cleaning should be reduced.

Where the atmosphere is deemed to be non hazardous, e.g., rural or a "normal" urban environments, then the period between cleaning can be extended up to a maximum of 18 months. However, if heavy soiling occurs more regular cleaning is required.

This Technical Data Sheet is for guidance only. For further assistance please contact one of our Project Consultants by contacting our Marketing Team as shown below.

© Sapa Building Systems Limited. This data sheet is issued subject to the condition that it shall not be reproduced without the consent of Sapa Building Systems Limited in writing.

Brochure reference: **C3365** 1208