

Maintenance | manual



- How to look after wood
- A simple guide to getting set up

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1 – maintenance for **marker lights**

In the world of urban street furniture, and particularly in the world of outdoor lighting, the rapid increase in the importance of aesthetic considerations in projects and in the equipment specified for them, has led to increased expectation that the finished effect should continue to look good over time, as should the products.

→ Today a marker light does not just provide light: it has to look good too. Therefore the appearance of the product needs to be looked after throughout its life

Just as changing lamps is vital to ensure that the product continues to work, so proper maintenance of the fitting itself will ensure that it continues to look good, irrespective of which materials are used to make it.

The notion of sustainable development dictates that products should continue to work and not be allowed to decay. So it is that a commitment to maintenance is essential, not just for the lights themselves, but also for the fittings that contain and support them.

Allowing for the maintenance of Aubrilam masts is therefore part and parcel in the business of capital investment in sites and projects.

2 – maintenance of **aubrilam columns**

→ Aubrilam masts are made of a combination of materials :
wood and metal.

WOOD : In this guide we will address only the maintenance of the wooden parts of our products. The technical characteristics and function of wood are not much affected by lack of maintenance as of course it does not rust. On the other hand, the appearance of wood can suffer considerably if it is not looked after.

METAL : For guidance on the maintenance of the non wooden parts of the light fitting (metal, electrical components), we suggest that you consult an Exterior Lighting maintenance guide issued by your own national Electrical Standards Authority.

3 – maintenance of **aubrilam wood**

The basis of our approach is correct diagnosis of the problem.

→ Aubrilam's HTE-E manufacturing process is designed to assure the ability of our products to continue to perform and to optimise the durability of the glued laminated wood outside. This procedure includes a woodstain finishing component which colours and protects the surface of the wood.

To achieve the required finish three woodstain coats are applied ; one coat to penetrate the wood and two colouring and protecting coats. Woodstain is a surface treatment which reduces the damage done by humidity and protects from UV. The micro-porous quality of the woodstain chosen enables it to tolerate dimensional variations in the wood without flaking. The great advantage of this is that it means there is no need to sand the shaft when maintenance work takes place, making it a lot simpler than a similar procedure carried out on metal (brushing, sanding, primer coat, two top coats of paint).

The interval at which maintenance work will need to be done, taking into account our manufacturing techniques, the fact that the wood is in an upright position and the quality of the woodstains we use, will be around seven years. An exception are sites next to the sea where sand and salt will sandblast exposed materials : the heat coating lacquer and woodstain are equally affected. Remember that wood is not sensitive to salt.

When carrying out preventative maintenance, by opting for a quality woodstain, a single coat will be enough to preserve the surface of the wood for another maintenance interval.

The shade of the woodstain used for maintenance should be lighter than that of the original coat to avoid the mast appearing darker after a number of recoatings.


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table 1
maintenance **methods**

METHOD	APPEARANCE OF WOOD SURFACE	ESTIMATED INSTALLATION DATE	PROCEDURE					
			BRUSHING	SANDING	RINSING	UNDERCOAT	WOODSTAIN	
							1 ST PROTECTIVE COAT	2 ND PROTECTIVE COAT
Stage A Preventive maintenance	<ul style="list-style-type: none"> → Colour dull but recognisable → Woodstain still 100% → Slight flouring of the woodstain 	7/10 years	YES	NO	YES	NO	YES	NO
Stage B Restorative maintenance	<ul style="list-style-type: none"> → Colour very dull but recognisable → Woodstain still more than 50% present → Pronounced flouring of the woodstain → Small cracks in the woodstain 	10/20 years	YES	NO	YES	NO	YES	YES
Stage C Curative maintenance (Renewing)	<ul style="list-style-type: none"> → Colour no longer recognisable → Woodstain cover less than 50% → Numerous small cracks → Appearance degraded 	20 years and over	NO	YES	NO	YES	YES	YES





Note : In some humid areas it is possible for the mast to be partially covered in moss. In this case brushing will be enough to remove it.





table 2
 maintenance **before and after**

METHOD	BEFORE	INSTALLATION DATE	AFTER
<p>Stage A</p> <p>Preventive maintenance</p>	 <p>St Jean de Monts, Vendee (2000)</p>	<p>7/10 years</p>	 <p>St Jean de Monts, Vendee (2006)</p>
<p>Stage B</p> <p>Curative maintenance</p>	 <p>St Jean de Monts, Vendee (1992)</p>	<p>10/20 years</p>	 <p>St Jean de Monts, Vendee (2006)</p>
<p>Stage C</p> <p>Curative maintenance (Renewing)</p>	 <p>Rochefort, Charentes Maritimes (1982)</p>	<p>20 years and over</p>	 <p>Rochefort, Charentes Maritimes (2005)</p>

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table 3
maintenance **procedures**






ACTION	BRUSHING	SANDING
ILLUSTRATION		
PURPOSE	→ Removing dust, moss and other residues	→ Completely remove the old woodstain
METHOD	→ Brush lightly and evenly	→ Sand evenly in a way to completely strip the wood
TOOLS		

ACTION	RINSING	WOODSTAINING
ILLUSTRATION		
PURPOSE	<p>→ Remove dust from brushing or sanding</p>	<p>→ Give an 'as new' appearance</p>
METHOD	<p>→ Spray from top down to the bottom and allow to dry.</p>	<p>→ Apply woodstain from top down to the bottom evenly. Allow to dry between coats.</p>
TOOLS		 <p>Refer to table in appendix</p>

NB : Place a plastic sheet at the base of the mast to prevent spills onto the ground.

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table 4
incidents

	BEFORE	PROCEDURE	AFTER
RESIN		<ol style="list-style-type: none"> 1. Remove the thickness of the resin using a flat scraper.  <ol style="list-style-type: none"> 2. Soak a clean dry rag with DPM cleaner*. 3. Rub over the resin spill without removing the woodstain. <p>NB : Resin seepage will stop naturally as soon as the resin pocket is empty.</p>	
CRACKS		<ol style="list-style-type: none"> 1. Press wood filler** into the crack. 2. Sand the area of filler by hand with 120 grade sandpaper. 3. Apply two coats of woodstain. (See woodstain table in appendix). 	

*See DPM solvent based cleaner in Appendix .

** Coloured wood filler by Sintobois (Use a filler of the same colour as the column).

table 5
vandalism

	BEFORE	PROCEDURE	AFTER
TAG		<p>Light recently done tag</p> <ol style="list-style-type: none"> 1. Soak the surface with an anti-graffiti wipe***. 2. Rub gently. 3. Rinse with water. <p>Old or heavily applied Tag</p> <ol style="list-style-type: none"> 1. Apply undiluted Biotag**** solvant onto the surface. 2. Leave it to work for 5 to 10 minutes. 3. Rub gently. 4. Rinse with water. 	
NOTCHES		<ol style="list-style-type: none"> 1. Press wood filler into the notch. 2. Drying : 20min. 3. Sand the filled area with 120 grade sandpaper. 4. Apply two coats of woodstain. <p>(refer to woodstain table in appendix).</p>	

***Eco anti-graffiti wipes for light and recently done tags

**** Eco cleaner for heavy and/or old tags (refer to appendix)

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on site **incident Form**

Site : Town/city :
Mast installation date: Last maintenance date:

No	Type of mast	Height	Quantity	Stage (A, B or C)	Photo(s)
1					
2					
3					
4					

Comments :

.....
.....
.....
.....

Woodstain guide

MAST COLOUR	STAGE A, 1 PROTECTIVE COAT :	STAGE B, 2 PROTECTIVE COATS :	STAGE C, 1 UNDERCOAT AND 2 PROTECTIVE COAT* :	
LIGHT OAK	SIKKENS FILTER 7 OREGON PINE	SIKKENS FILTER 7 OREGON PINE	1 ST COAT	SIKKENS HLS LIGHT OAK
			2 ST COAT	SIKKENS FILTER 7 LIGHT OAK
			3 ST COAT	SIKKENS FILTER 7 LIGHT OAK
DARK OAK	SIKKENS FILTER 7 LIGHT OAK	SIKKENS FILTER 7 LIGHT OAK	1 ST COAT	SIKKENS HLS DARK OAK
			2 ST COAT	SIKKENS FILTER 7 DARK OAK
			3 ST COAT	SIKKENS FILTER 7 DARK OAK
CHESTNUT	SIKKENS FILTER 7 DARK OAK	SIKKENS FILTER 7 DARK OAK	1 ST COAT	SIKKENS HLS CHESTNUT
			2 ST COAT	SIKKENS FILTER 7 CHESTNUT
			3 ST COAT	SIKKENS FILTER 7 CHESTNUT
MAHOGANY	SIKKENS FILTER 7 TEAK	SIKKENS FILTER 7 TEAK	1 ST COAT	SIKKENS HLS MAHOGANY
			2 ST COAT	SIKKENS FILTER 7 MAHOGANY
			3 ST COAT	SIKKENS FILTER 7 MAHOGANY
EBONY	SIKKENS FILTER 7 WALNUT	SIKKENS FILTER 7 WALNUT	1 ST COAT	SIKKENS HLS EBONY
			2 ST COAT	SIKKENS FILTER 7 EBONY
			3 ST COAT	SIKKENS FILTER 7 EBONY

1 litre of woodstain covers 12m²

For other woodstains, please contact Aubrilam

* the 3rd coat (=2nd protective coat) can be replaced by a transparent woodstain

SIKKENS

164, rue Ambroise Croizat - BP 140 - 93204 Saint-Denis cedex - France

Tel. : 01 48 13 83 00 - Fax : 01 48 09 99 61

www.sikkens.com.fr

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SINTOBOIS Industrie

INTRODUCTION

SINTOBOIS INDUSTRIE is a composite polyester filler made with wood powder and primary materials chosen to satisfy the demands of industrial wood working.

SINTOBOIS is available in the following shades: medium oak, fir, natural pine, old pine and light oak.

SPECIFIC CHARACTERISTICS

SINTOBOIS INDUSTRIE guarantees :

- easy application.
- an excellent hold (repairs deep damage).
- rapid drying.
- high resistance.
- easy sanding.

DRYING

- in open air : 20 mn for 2% of the sizing.
- ready to sand : 20 to 30 mn according to thickness and ambient humidity
- sanding : grade P80.

TECHNICAL PROPERTIES

- binder : unsaturated polyester resin.
- hardener : Benzoyl peroxide.
- density : 0.98 g / cm³.
- viscosity : thixotrope putty.
- flashpoint : 31 °C.
- storage : 12 months in original packaging, tightly sealed between 18 and 25 °C away from direct sunlight (keep away from excessive heat or cold)

RECOMMENDATIONS AND PRECAUTIONS

Mix the product well before use.

Do not use in ambient temperatures below 10°C.

Take care to warm putty and surfaces before use if these are stored in cold or humid conditions.

Do not allow any tool which has been used to mix the hardener and not subsequently cleaned into contact with putty remaining in the tin.

HYGIENE AND SECURITY

- Reseal tins and tubes after use.
- Disposal by tipping is acceptable.
- Do not eat, drink or smoke while using the product.
- INFLAMMABLE.
- HARMFUL if inhaled
- Irritating for skin and eyes.
- Phrases R : 10, 20, 36/38.
- S : 26 .
- Contains styrene : concentration > 12.5%.

SINTO

Parc d'activites Napollon
av. des Templiers 13676 Aubagne cedex
Tel.: 33 (0) 4 42 18 59 59 - www.sinto.fr

DPM (methoxypropoxypropanol)

FORMULA :

CH₃-O-(CH₂)₃-O-(CH₂)₃-OH

(CAS : 34590-94-8 / EINECS : 252-104-2)

2-Methoxyethylethoxypropanol, Monomethylether de dipropylèneglycol

APPEARANCE

Colourless, clear, solvent soluble in water; alcohol-like odour.

CONCENTRATION

Methoxy propoxy propanol : min. 99.0 % wt.

PHYSICAL PROPERTIES

Density (20°C) (ASTM D 4052) : 0.943 – 0.961 kg/l

Refractive index (20°C) (ASTM D 1218) : 1.420 – 1.4 25

Colour (ASTM D 1209) : max. 15 Hazen

Flash point : 75 °C

Distillation range (1013 mbar) (ASTM D 86) : 180 – 195 °C

CHEMICAL ANALYSIS

Water (KF) : max. 0.1 %

Acidity (as Acetic acid) (ASTM D 1613) : max. 0.01 %

SAFETY REGULATION

Water (KF) : max. 0.1 %

Acidity (as Acetic acid) (ASTM D 1613) : max. 0.01 %

Information in this publication is believed to be accurate and is given in good faith, but it is up for the customer to satisfy him or herself of its fitness for purpose.

No representation, warranty or guarantee is made as to its accuracy, reliability or completeness.

BRENTAG N.V. • Nijverheidslaan 38 - B-8540 DEERLIJK

Tel. 056/77.69.44 • Fax 056/77.57.11 - info@brenntag.be

Certified supplier ISO 9001:2000 – ISO 14001:2004 – GMP+ animal feed.

Ecological antigraffiti stripper BIO TAG[®]

PROPERTIES:

- BIOTAG[®] eliminates all types of graffiti on all kinds of surfaces such as wood, concrete, aluminium and all metals.
- BIOTAG[®] is effective against all types of acrylic based paints, glycerophthalic paints, vinyl based paints, epoxides, polyurethanes and mono or bi component paints. After application, certain paints do not blister, but can be removed easily using a scraper.
- BIOTAG[®] is perfectly safe for people and the environment.
- BIOTAG[®] is economic, thanks to its semi-aqueous formula, stripping occurs rapidly.

CHARACTERISTICS:

- colourless liquid.
- Odour : negligible
- Density : 1,01 +/- 0,01
- Flashpoint 21°C

USAGE:

- spray the undiluted and unheated product onto the surface to be stripped or cleaned.
- Leave to work for 5 to 15 mins according to the type of soiling and the surface.
- Brush and/or rinse liberally with water.

- Repeat the treatment if necessary.
- On delicate plastics, try out the product on a hidden area of the surface.
- Dipping: immerse the piece to be stripped completely. Allow to work, then rinse with water sprayed under pressure. Retrieve left-over stripper in an airtight container. Use in a ventilated area.
- CAUTION! : not recommended for plexiglass or delicate plastics!

PRECAUTIONS FOR USE:

- to be used by professionals only.
- F : Highly inflammable.
- R11 : Highly inflammable.
- S2 : Keep out of the reach of children.
- S3 : Keep in a cool place (not essential, but advisable).
- S9 : Keep the treated surface in a well ventilated place.
- S16 : Keep away from all naked flames or sources of sparks. Do not smoke while using this product.

Compiled : 13.02.06

IPC SAS – CS 71821 - 29218 BREST CEDEX 1

Tel. : 02.98.43.45.44 - Fax : 02.98.44.22.53 - www.ipc-sa.com

Antigraffiti wipe • BUILDING CHIFFONNETTE ANTIGRAFFITI

PROPERTIES:

- BUILDING CHIFFONNETTE ANTIGRAFFITI has been specially designed for use on smooth non porous surfaces.
- It quickly removes graffiti, tags, inks and persistent paint on : cement, glass, tiles, porcelain, metal, plastic...
- It can be used in underground stations and railway stations on signage, windows, vehicles, telephone cabins, lifts, metal shutters....
- Packaged in a container with a handle, the wipes are ready and easy to use for all kinds of cleaning teams.
- Does not contain solvents dangerous for users or for surfaces.

CHARACTERISTICS:

- Unwoven wipe.
Format : 250x300 mm.
- Number of wipes per container : 70.
- Colour : orange.
- Scent : mandarine.

HOW TO USE:

- Make a preliminary test on any new surface to be treated.
- Pull out an impregnated wipe horizontally to the pre-cut line. Separate with a brisk tug.
- Rub the surface to be cleaned with the abrasive side using a circular motion.
- Then wipe with the soft side.

- For stubborn stains (especially old tags that are well encrusted) dampen the surface beforehand with the wipe and allow to work for a few minutes before rubbing.
- Do not rinse, allow to dry in the open air.
- Close the container securely after use to prevent wipes from drying out.

PRECAUTIONS FOR USE:

- For use by professionals only.
- Wearing of gloves is advisable.
- Do not swallow or inhale.
- Keep out of the reach of children.
- Avoid contact with eyes ; rinse immediately with water and contact your doctor.
- Formula deposited at the anti poison centre on 01.45.42.59.59 (ORFILA). (France only)

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recommendations of the French Lighting Union to guarantee the performance of equipment (extracts)

In exterior lighting, today's investments are tomorrow's costs. Public project managers and contractors know that although equipment looks like it will go on for ever, keeping it working effectively can only be assured within the framework of a regular maintenance programme which is based on simple imperatives that are often neglected or ignored. Through this leaflet, aimed principally at the concerned parties, the Lighting Union (Syndicat de l'Éclairage) wants to provide a summary of essential maintenance procedures upon which any equipment guarantee depends for each group of products connected to the national grid.

In accordance with clauses set out in the regulations, all of these maintenance procedures must be carried out by qualified companies employing trained personnel. Only in this way can safety and adherence to the legislation be guaranteed. The intervals at which these procedures are carried out should take into account the various aspects of an installation. In any case certain exposed sites (coastal/heavily polluted etc) will require special monitoring at reduced intervals which comply strictly with the manufacturers' instructions.

The Lighting Union (Le Syndicat de l'Éclairage) hopes that this leaflet will provide all those involved with the project with the basic essentials for the efficient running and management of any given installation.

SUPPORTS

steel: Clean the surface of the lighting structure using soapy water for galvanised columns and a polishing product for painted columns.

Carry out any minor repairs to the finish using a zinc based paint.

Physical or chemical deterioration of the paint may be a visible symptom of the decay of the structure itself.

aluminium: Clean the surface of the structure using soapy water for brushed columns and a polishing product for painted columns.

Physical or chemical deterioration of the paint may be a visible symptom of the beginnings of corrosion of the structure itself.

cast iron: Clean the surface of the structure using soapy water for untreated columns and a polishing product for painted columns.

For cast iron pieces more than 10 years old, sand blasting and repainting should be considered. Consult the manufacturer about this step.

wood: Maintaining wood columns involves renewing the surface coat of woodstain. This should be done every 7 years (5 years on exposed sites).

This procedure should be carried out during fine weather. Light brushing and the application of a coat of woodstain with a broad brush are often all that is needed.

Concrete: Cleaning using a high pressure water jet is advised should moss or various other stains appear.

SAFETY SYSTEMS (For high columns)¹

Condition of the cable and greasing • Condition of the harness.

Presence of rungs • Secure fixing of rungs.

LADDER SYSTEM COLUMNS¹

Visual check for evidence of corrosion at the base of the assembly at ground level.

Note : Annual maintenance checks are obligatory for lighting columns with mobile systems. Six monthly checks are obligatory for lighting columns equipped with maintenance lifts, and on the life line and anti fall systems on columns or lighting grids. (statute 91-1414 and 92-765).

CHECKING THE SECURE FIXING OF BRACKETS AND LANTERN ACCESSORIES¹

Head screw. Presence of screw. • Check tightness. • Check fitting of the supporting arm and of the lantern.

INSPECTION DOOR²

Adjustment and presence of door. • Condition of fastener and lubrication. • Evacuation of stagnant water.

Unblock drain hole. • Cleaning the bottom of the mast.

EMBEDDING RIVETS²

Lubrication on threads. • Check tightness.

INDUCED CURRENT³

Ground level control (obligatory for aluminium). • Check insulation of the heel plate

PEDESTAL³

Visual check of pedestal. • Perpendicularity of pedestal in relation to the ground.

Compacting of soil around pedestal.

ACIDITY OF THE SOIL³

On installation or later if problems arise, a check on the chemical characteristics of the soil may be necessary.

N.B. : A lighting column serves to support a luminaire for public lighting. Columns are designed to resist known and given loadings, taking into account the prevailing wind conditions in a particular area. Any addition of accessories and any check on mechanical or physical resistance should be verified beforehand with the manufacturer of the column.



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Periodicite :

1 At each relamping for all lanterns

2 every year

3 every three years