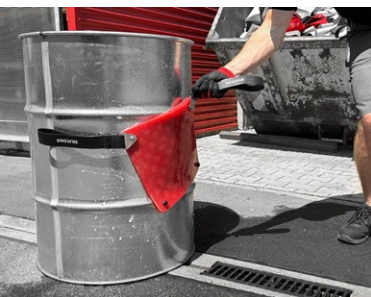


Magnetic Leak Patch MLP



INSTRUCTIONS FOR USE

EN



Development and Production

metal arsenal®

Metal Arsenal s.r.o.
Owner of Eccotarp
trade mark

Poděbradova 1920
289 22 Lysá nad Labem
Czech Republic

T +420 737 802 153
T +420 603 117 839
T +420 777 472 640

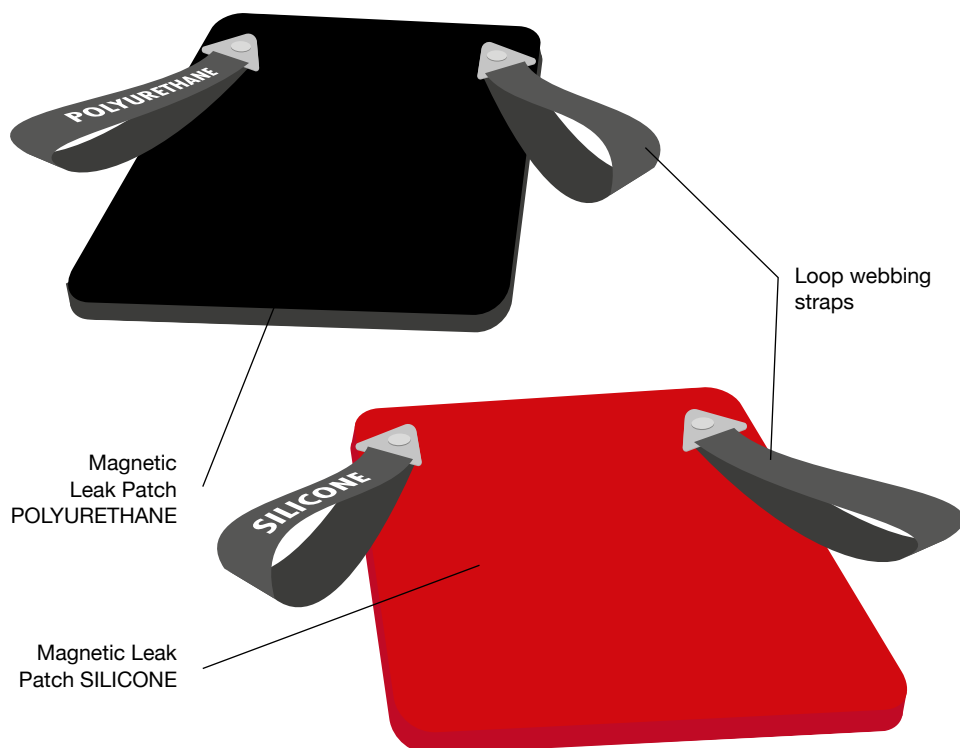
E info@eccotarp.com

www.eccotarp.com

This document describes the operation and characteristics of the Magnetic Leak Patches (hereinafter “patches”). It contains important information about how to use the patches properly and how to increase their reliability and life. This document must always be available in the place where the patches are used. Keep it together with the patches at all times. The operator is responsible for using the patches safely and in compliance with the instructions in this manual, which applies to any third persons as well. If you have any doubts about the correct use of the patches, please contact the manufacturer or an authorized dealer.

Magnetic Leak Patches MLP are the fastest, safest, and most effective way to immediately stop or prevent undesirable leaks, for example from punctured steel drums, tanks, cisterns, pipelines, etc. Thanks to the quick application of the patch to the damaged object, contamination of the responder, the surrounding soil, and water is minimized.

Magnetic Leak Patch MLP



The delivery includes:

- 1× Magnetic Leak Patch MLP
- 1× Carrying case blocking magnetic force
- 1× Instructions for use, incl. warranty certificate
- + Accessories – standard/optional as per agreement

Types of Magnetic Leak Patches MLP

Magnetic Leak Patch SILICONE (MLP SIL)

The Silicone Magnetic Leak Patch is manufactured from high-quality flexible addition-cured silicone elastomer with exceptional chemical resistance and extreme thermal durability (see Chemical Resistance Certificate). Implemented High Quality Strong Rare Earth Magnets **can hold guaranteed up to 37,5 pounds of pressure (17 kg)**. Magnetic Patch is available in 2 sizes. The smaller patch is delivered with 2 loop webbing straps, the bigger one with 4 loop webbing straps. Thanks to the unrivalled silicone material, the operating temperature range extends from **-80°C up to +280°C**. The material used is highly resistant, for example, to alkaline substances, diluted acids, oxidants, alcohols, glycols, vegetable and animal oils, and fats. If increased chemical resistance of the patch is required, we recommend using a disposable Teflon sheet, which we supply with the patch as optional paid accessory. The patch can also be supplied in an antistatic version. Thanks to the absolute health safety of silicone, the patch is ideal for use in healthcare, laboratories, paint shops, heating plants, as well as in the food, pharmaceutical, medical, and electrical industries.

Magnetic Leak Patch POLYURETHANE (MLP PUR)

Magnetic Leak Patch is manufactured from High Quality Flexible Urethane with High Thermal and Chemical Resistance. Implemented High Quality Strong Rare Earth Magnets **can hold guaranteed up to 37,5 pounds of pressure (17 kg)**. Magnetic Patch is available in 2 sizes. The smaller patch is delivered with 2 loop webbing straps, the bigger one with 4 loop webbing straps. Temperature resistance is from **-55°C up to +110°C**. The material used is highly resistant, for example, to petroleum products, mineral oils, and lubricants. If increased chemical resistance of the patch is required, we recommend using a disposable Teflon sheet, which we supply with the patch as optional paid accessory. The patch is ideal for use, for example, in the oil, petrochemical, automotive, or mining industries, as well as in logistics, construction, or mechanical engineering.

Technical details

Magnetic Leak Patch SILICONE (MLP SIL)

Type	Material	Dimensions (mm)	Weight (g)
MLP SIL 30	addition-cured silicone elastomer	300 × 300 × 16	3000
MLP SIL 45	addition-cured silicone elastomer	450 × 450 × 16	7000
Standard accessories			
Carrying case: MLP SIL 30		410 × 410 × 110	1120
MLP SIL 45		550 × 550 × 110	2300
2pcs ratcheting strap system			1860 (930/pc)
4pcs strap guide plates			280 (70/pc)
Optional accessories at extra cost			
Teflon sheet for MLP SIL 30		585 × 585	
MLP SIL 45		810 × 810	

Magnetic Leak Patch POLYURETHANE (MLP PUR)

Type	Material	Dimensions (mm)	Weight (g)
MLP PUR 30	polyurethane elastomer	300 × 300 × 16	3000
MLP PUR 45	polyurethane elastomer	450 × 450 × 16	7000
MLP PUR 45 C52 – patch with pass-through valve	polyurethane elastomer	450 × 450 × 31	7240
Standard accessories			
Carrying case: MLP PUR 30		410 × 410 × 110	1120
MLP PUR 45		550 × 550 × 110	2300
2pcs ratcheting strap system			1860 (930/pc)
4pcs strap guide plates			280 (70/pc)
Optional accessories at extra cost			
Ball valve			
Chemical hose with C52 coupling			
STORZ Elbow C52			
Teflon sheet for MLP PUR 30		585 × 585	
MLP PUR 45		810 × 810	

General information



When using the patches, observe these instructions as well as all the safety notices herein.

1. The patches may only be operated by an authorized, professionally qualified, and trained person.
2. The patches are designed as a quick solution for emergency and accident situations. They serve to immediately stop the leakage of hazardous substances, for example from punctured steel drums, tanks, cisterns, pipelines, etc.
3. The patch is not intended as a long-term or permanent solution, but only as a temporary emergency sealing of a leak until a permanent remedy of the problem is ensured.
4. The patches are available in 2 sizes and 2 material types – POLYURETHANE and SILICONE.
5. If necessary, the patch can be relocated at any time.
6. The patches are resistant to a wide range of hazardous substances – see the Chemical Resistance Certificate. Given the large number of chemical substances and the different conditions of their application and other influencing factors, the Chemical Resistance Certificate has only an indicative character. To make a valid conclusion on the degree of chemical resistance of the patch to a specific chemical substance, we always recommend carrying out individual resistance tests.
7. Using a Teflon sheet significantly increases the chemical resistance of the patch.
8. The patches are flexible, durable, and reusable.
9. Minor surface irregularities on the patch – such as bubbles or small indentations – are not material defects. They occur during the manufacturing process and have no effect on the patch's functionality.
10. The temperature ranges for using the patches are given in the chapter Types of Magnetic Leak Patches MLP, p. 3.
11. Ideal storage is recommended in the carrying cases, which are a standard part of the product.

Disclaimer

1. The Magnetic Leak Patch has been designed and manufactured with the utmost care and responsibility. It is made of a flexible, sealing elastomer (silicone or polyurethane), extremely powerful rare-earth magnets, and additional components made of magnetic and non-magnetic steel. The overall performance of the product, including its durability and service life, depends on proper maintenance and, above all, on the specific conditions under which it is used. The user bears sole responsibility for the manner in which the product is used. The manufacturer accepts no liability for improper or inappropriate use of the product or for any damage resulting therefrom.
2. The material properties stated apply under normal ambient conditions. Temperature resistance and flexibility values are provided for guidance only and cannot be guaranteed when the material is simultaneously exposed to heat and chemicals. For example, the specified temperature resistance does not apply during prolonged exposure to hot oil or acids.
3. Each use of the Magnetic Leak Patch may result in molecular-level contamination of its materials. Consequently, changes in the material properties may occur even long after the product has been used. For this reason, we recommend regular inspection of the Magnetic Leak Patch, even if it has not been used for an extended period. The Magnetic Leak Patch can only be considered to be in perfect condition prior to its first use. Any application may cause visible or invisible damage to the material, resulting in degradation of the Magnetic Leak Patch and a subsequent reduction in its effectiveness during future applications.
4. The Magnetic Leak Patches are intended exclusively for use on magnetic surfaces. The suitability of a Magnetic Leak Patch depends on the size of the opening and the pressure of the leaking liquid. The larger the opening, the lower the pressure that the Magnetic Leak Patch is capable of sealing. Small holes and cracks can be reliably sealed at pressures of up to 0.3 bar. For larger cracks, the maximum safe operating pressure decreases proportionally. The sealing performance is also affected by the condition of the surface to which the Magnetic Leak Patch is applied. Uneven or rough surfaces may allow liquid to pass through, thereby reducing the effectiveness of the Magnetic Leak Patch.

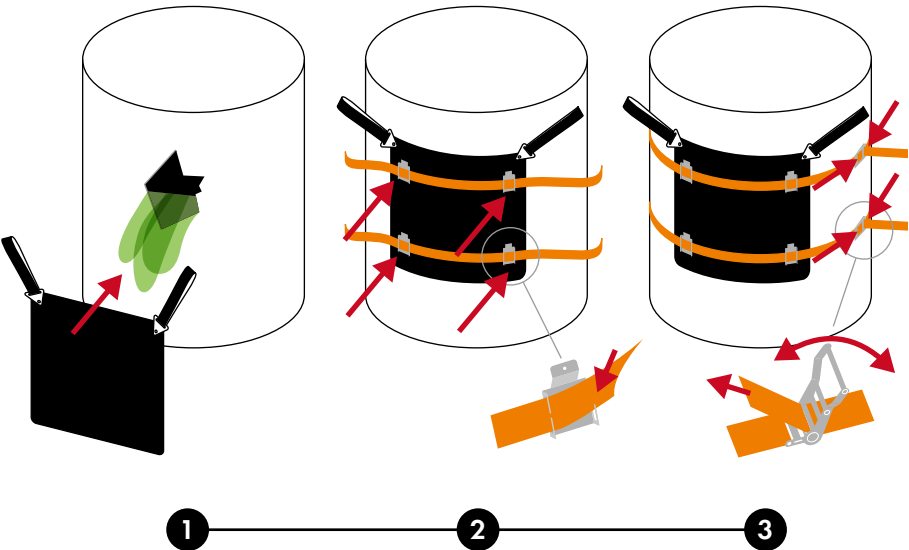
Instructions for use

Magnetic Leak Patch MLP

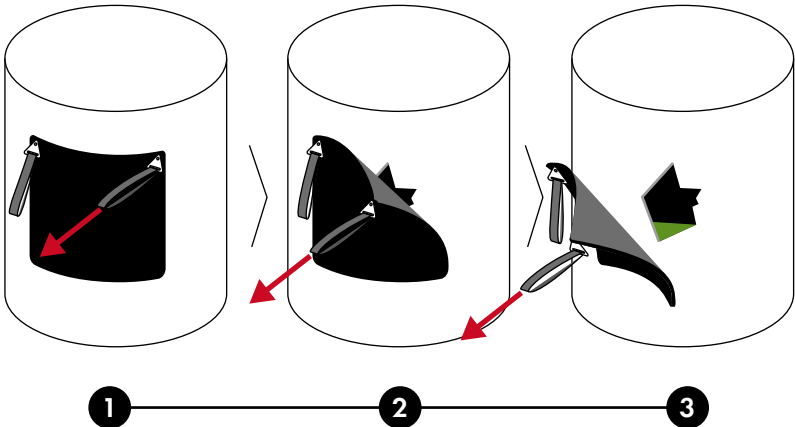


1. The Magnetic Leak Patch may only be used by an authorized, professionally qualified person.
2. Before use, the operator must be equipped with appropriate PPE – e.g. protective suit, protective helmet, safety glasses, protective gloves, safety footwear, etc.
3. Ensure that no unauthorized person is present in the hazardous area during the patch application process.
4. Remove the patch by grasping the straps from the carrying case and check that it is undamaged and in perfect condition.
5. Apply the patch by attaching, throwing, or using a rod. This method protects the responder from direct contact with hazardous substances.
6. If increased chemical resistance of the patch is required, we recommend using a Teflon sheet, which we supply with the patch as optional paid accessory.
7. To apply the Teflon sheet, first spread it out on a clean surface free of dirt to avoid damage. Place the patch onto this sheet. Fold the protruding edges of the Teflon sheet over onto the patch. Attach the Teflon sheet to the patch using fixing loops on the straps. Then apply the protected patch to the damaged object using the handling straps – see the Illustrated Guide below.
8. To increase the pressing force, fixing straps can be applied to the patch, securing it to the damaged object; these are standard parts of the product package.
9. If necessary, the patch can be relocated at any time.
10. Removing the patch from the damaged object is done after removing the fixing straps – grasp the loop webbing strap at one corner of the patch and slowly pull it away at a 45° angle until the patch is fully removed – see the Illustrated Guide below. Hold the loop webbing strap at the other corner during removal to avoid injury caused by rapid detachment of the patch.
11. The used or contaminated Teflon sheet may, after being removed from the Magnetic Leak Patch, be disposed of in an environmentally responsible manner in accordance with applicable legal regulations or cleaned with an appropriate neutralizing agent (when contaminated by aggressive chemicals), lukewarm water, or another suitable cleaning agent for subsequent reuse, provided that it has not been damaged during its previous use.

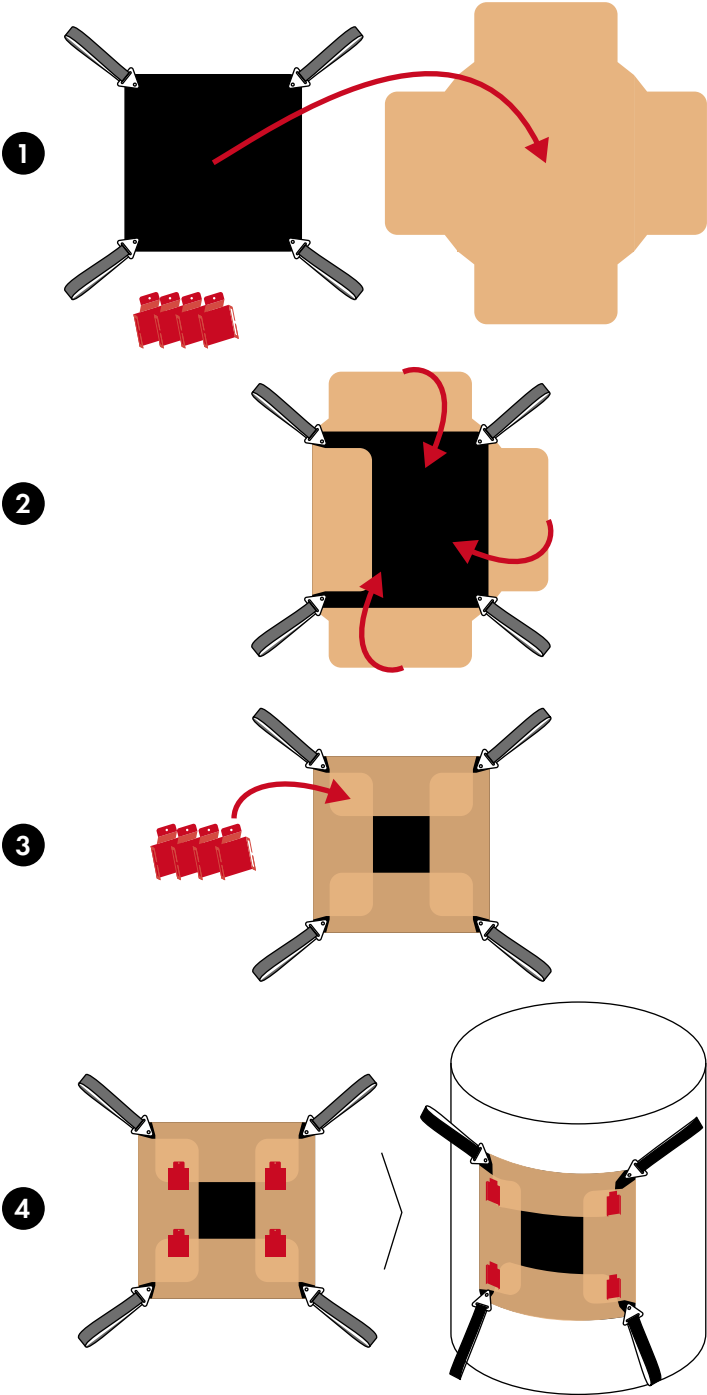
Instructions for using of Magnetic Leak Patch and ratcheting straps



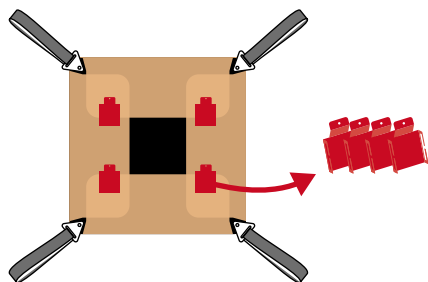
Illustrated guide to removing the patch from the damaged object



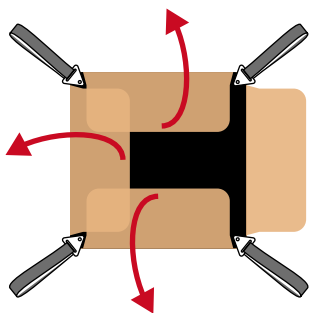
Illustrated guide to applying/removing the Teflon sheet



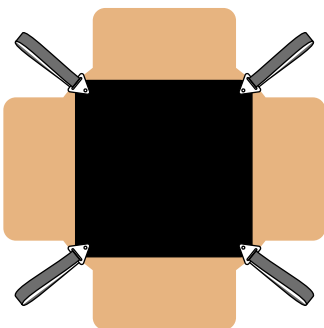
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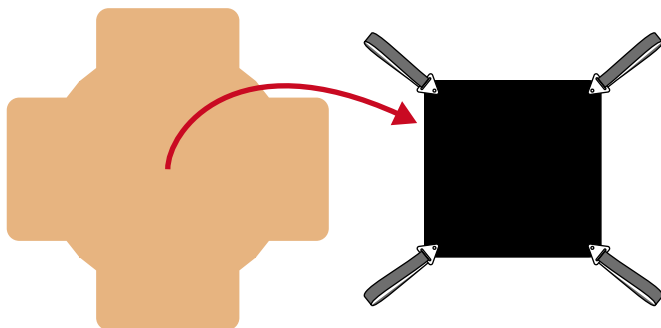
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Handling instructions and safety warnings

1. The Patch may only be used by an authorized, professionally qualified person equipped with suitable PPE.
2. No unauthorized persons may be present at the intervention site.
3. Before and after use, it is always necessary to check the condition of the patch and accessories.
4. Never use a damaged patch or damaged accessories. If damage occurs to the extent that the magnets are exposed, the patch can no longer be used. Exposed magnets may produce sparks if struck.
5. Minor surface irregularities on the patch – such as bubbles or small indentations – are not material defects. They occur during the manufacturing process and have no effect on the patch's functionality.
6. For intervention, always use a patch that is larger than the leak area to ensure sufficient pressing magnetic force.
7. Observe the chemical and temperature resistance of the individual types of patches. Using the patch outside the recommended temperature range may damage the magnets and cause a loss of magnetic force.
8. Before use, it is advisable to identify the type of leaking hazardous substance in order to determine the correct type of patch according to its specific chemical resistance.
9. If increased chemical resistance of the patch is required, we recommend using a Teflon sheet.
10. The Magnetic Patch is not intended for use in explosive atmospheres or in environments with an increased risk of explosion – with the exception of the Antistatic Silicone Magnetic Leak Patch.
11. Apply the Patch, for example, to punctured steel drums, tanks, cisterns, pipelines, etc.
12. Apply the Patch using handling straps, by throwing, or with a rod. Never insert your fingers between the Patch and the damaged object during application.
13. Do not bring the product near fire or other direct heat sources.
14. The temperature range for using the Patches is given in the chapter Types of Magnetic Leak Patches MLP, p. 3.
15. The Patch is resistant to a wide range of hazardous substances – see the Chemical Resistance Certificate.
16. The Patch should ideally be stored in the special carrying case, which eliminates its magnetic force, protects it from UV radiation, and is a standard part of the product.
17. After each use, the Patch must be thoroughly washed and cleaned with suitable cleaning agents and allowed to dry completely.
18. Before removing the Patch, make sure that hazardous substances have been completely drained from the damaged container.
19. Follow occupational safety principles when handling hazardous liquids and substances harmful to the environment.
20. Ensure compliance with all necessary preventive measures for personal safety, such as the use of protective equipment, etc.

Factors affecting magnetic force

The pressing force of the implemented magnets is influenced, in addition to the Patch manufacturing technology, also by the following factors:

- An air pocket between the damaged object and the Magnetic Patch
- Uneven structure of the damaged object, e.g. rough surface with protrusions, irregular shape of the object
- Type and thickness of the material of the damaged object with varying high/low iron alloy content
- Temperature of the material of the damaged object – high temperature reduces the effectiveness of the magnets used – upon reaching a temperature of +200 °C, the magnets lose their magnetic holding force

Accessories

The Magnetic Leak Patch MLP is supplied as standard with ratcheting straps and strap guide plates. Using this accessory significantly increases the adhesion of the patch to the damaged object.

Maintenance and storage

After use, the product must be washed with a suitable neutralizing agent (for aggressive substances), lukewarm water, or another suitable cleaning agent. Never clean the Patches using rough mechanical or pressure methods (brushes, pressure washers, compressed air, etc.). Use, for example, soft cleaning cloths. After thoroughly drying the Patch, we recommend storing it preferably in covered areas, in the special case that is a standard part of the product, which protects the Patch from damage and UV radiation and eliminates its magnetic effect when not in use. The product must be stored at the optimal storage temperature of -20°C to $+25^{\circ}\text{C}$.

Important contact information

Manufacturer and qualified service:

Metal Arsenal s.r.o.
Poděbradova 1920
289 22 Lysá nad Labem
Czech Republic

info@eccotarp.com
T: +420 737 802 153
T: +420 777 472 640
T: +420 603 117 839

Repair

Any repair work on the product must always be done by the manufacturer's qualified personnel. In the event of unprofessional repair or design change, the product's proper operation cannot be guaranteed. If you want to request repair, order accessories or lodge a complaint, please, contact your qualified supplier.

Warranty conditions

The warranty period is indicated in the warranty certificate on the last page of these Instructions for use. The warranty period is 24 months and begins on the day indicated in the warranty certificate. The warranty does not apply to the normal wear and tear or to damage caused by improper use or by the instructions in this manual not being observed.

Disposal

The product must be disposed of in compliance with applicable legal regulations and with the user's internal directives.

Warranty Certificate



This product is guaranteed for 24 months.

This warranty covers:

defects caused by a manufacturing defect of the material used – and any further damage not demonstrably caused by improper handling by the user or any modification of the product.

This warranty does not cover:

damage caused by improper handling of the product and non-compliance with the “Instructions for Use” – e.g. cutting or other mechanical damage to the Patch, placing it on an unsuitable surface with sharp edges, abrasion, or placing the product near an open flame, etc.

The manufacturer is not liable for any direct or indirect damage caused by other than the recommended use of the product.

Complaints must be applied within 24 months of purchase from your supplier. When applying please provide your complaint with full details – product serial number, proof of purchase, appropriate photographic documentation and a detailed description of the circumstances in which a fault has occurred.

Product name:

Production code:

Stamp and signature:

Date of sale:

In case of problems, please contact:

Failure description: