hotfix APPLICATION

The SWAROVSKI ELEMENTS assortment includes a wide range of Hotfix products. These can be applied simply, quickly and securely. Hotfix technology is ideal for application in the fields of textiles, interior décor and accessories.

HOTFIX APPLICATION

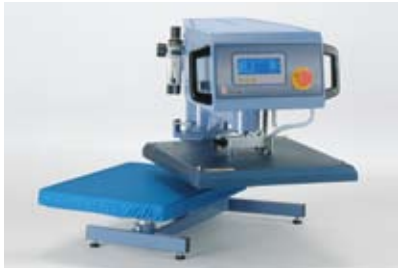
PRODUCT OVERVIEW

The following products are suitable for Hotfix application:

	HOTFIX APPLICATION
Flat Backs Hotfix	✓
Transfers	✓
Crystal Fabric	✓
Crystal Rocks	✓
Crystal Transfabric	✓
Crystaltex	✓
Crystaltex Chaton Bandings	✓
Crystal Mesh	✓

MACHINES, TOOLS, AND AIDS

The following machines, tools and aids are necessary for the Hotfix application of SWAROVSKI ELEMENTS:



Heat press

Double heat press

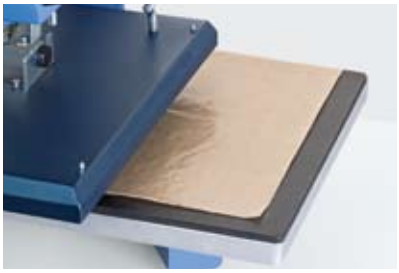
Continuous fusing press

Ultrasonic device

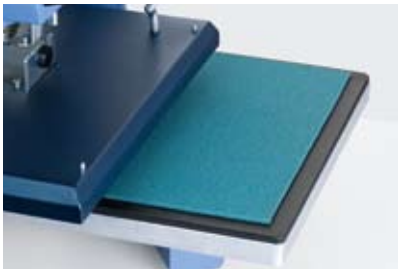
Stone setting machine

Applicator

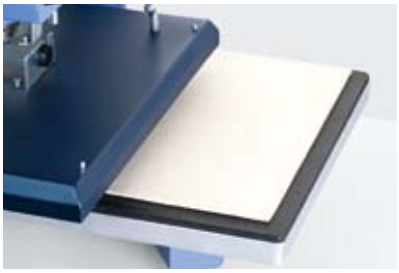
Iron



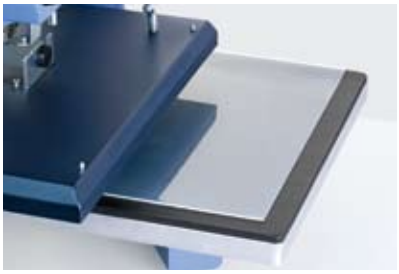
Teflon®
Art. 9010/003



Silicone foam
Art. 9010/002



Felt
Art. 9010/001



Silicone pad
Art. 9010/005

Normal cardboard

Normal pressing cloth

Temperature measuring strips
Art. 9010/007

Laser temperature measuring device

Transfer film

SUPPLIERS

This list provides an overview of select suppliers worldwide.

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
Heat press	Bestblanks	www.bestblanks.com
	CSC Screen Process	www.cscscreen.com
	Elna SMP Singapore	www.elnasingapore.com
	Fukutomi Equipment & Supplies	www.fukutomi.net
	Hix Corporation	www.hixcorp.com
	Huangyan Garment Machinery company	www.ji-feng.com
	Jess J. Heap & Son, Inc.	www.jesseheap.com
	Nagel & Hermann	www.nundh.com
	OSHIMAKK Co., Ltd.	www.oshima.com.tw
	Pro World	www.proworldinc.com
	Rhinestone Machine	www.rhinestonemachine.com
	RPL Supplies, Inc.	www.rplsupplies.com
	Stahl's	www.stahls.de
	Teva	www.teva-organisation.com
	Thermopress Europe	www.thermopressen.de
Double heat press	Teva	www.teva-organisation.com
Continuous fusing press	Maschinenfabrik Herbert Meyer GmbH	www.meyer-machines.com
Ultrasonic device	Ever Green Ultrasonic Co., Ltd.	www.evergreen-taiwan.com
	Huangyan Garment Machinery company	www.ji-feng.com
	Teva	www.teva-organisation.com
	Jess J. Heap & Son, Inc.	www.jesseheap.com
	Nagel & Hermann	www.nundh.com
	Perfecta Schmid Produkte AG	www.perfecta.ch
	Pessani s.r.l.	www.pessani.com
	Rhinestone Machine	www.rhinestonemachine.com
	Shanghai Exing industry Co., Ltd.	www.exingsh.com.cn
Stone setting machine	Dairo Machine Co.	www.dairomc.com
	Nagel & Hermann	www.nundh.com
	Pessani s.r.l.	www.pessani.com

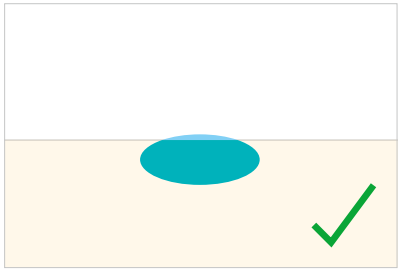
Before beginning the application process, you should always check whether the carrier material is suitable for Hotfix application. Please check the following criteria:

- heat resistance (min. 120°C/250°F)
- resistance against pressure
- application area of the product
- suitability of surface properties and absorbency

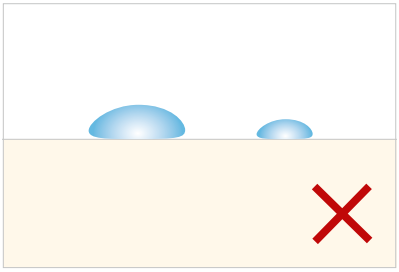
Checking absorbency via the water drop test

The water drop test is a quick and easy way to get an initial idea of the absorbency of the carrier material.

Apply a couple of drops of water onto the carrier material. If the material quickly absorbs the drops, it offers good absorbency. If the water pearls off the carrier material, or if it takes a long time to be absorbed, the material offers insufficient absorbency. This can impair the effectiveness of Hotfix application.



Good absorbency
Drops are absorbed



Insufficient absorbency
Drops pearl off

Some textiles and special finishes are **unsuitable** for Hotfix application, due to a **lack of absorbency**.

This is a list of **unsuitable** carrier materials and finishes:

- very tightly woven textiles
- very thin fabrics, e.g. organza
- smooth leather and smooth imitation leather (Swarovski application solutions such as Chaton Leather and Flat Back Leather are featured in the “General Information” chapter)
- hydrophobic or water-repellent treatments (silicone, synthetic resin as a waterproofing agent)
- Teflon coatings
- stain-resistant treatments
- easy-to-care treatments
- fluorocarbon finishes
- softening agents
- select dyes (dyes with metal pigments)
- enzymatic treatments

It can sometimes be helpful to wash the carrier material before application, in order to remove any unsuitable finishes (particularly softening agents), and thus improve absorbency.

Generally, the following parameters are most important when carrying out Hotfix applications of SWAROVSKI ELEMENTS:

- Temperature
- Pressure
- Application time
- Application side

A detailed summary of all application parameters can be found in the Hotfix Selector table at the end of this chapter.

Temperature

Swarovski Hotfix adhesive is activated within a temperature range of 120°C to 170°C (250°F to 340°F). A suitable application temperature can be selected from this range according to the carrier material and its sensitivity to heat.

With heat presses, the temperature selected on the display does not always reflect the actual temperature on the surface of the press. Often, the temperature can be distributed unevenly, or one heat plate may be defective.

It is therefore recommended to regularly check the temperature with a laser measuring device or temperature measuring strips at various points on the heating surface, to ensure the temperature is distributed evenly across it.
Checks should be carried out regularly (once per week), particularly during production.

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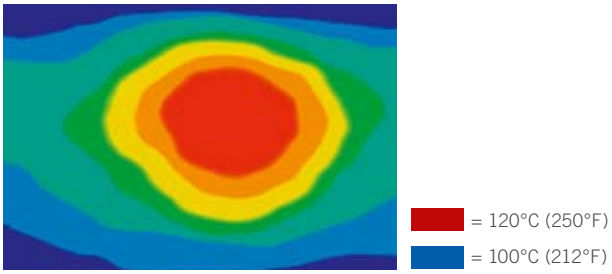
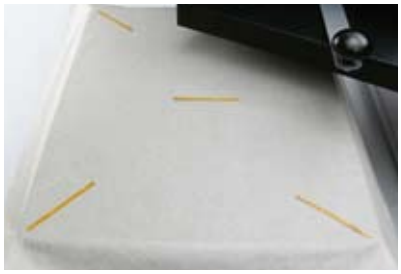


Uneven heat distribution in the central area of the heat press



Test with temperature measuring strips

Pressure

The pressure setting depends on the Hotfix elements to be applied, the carrier material, and the technical equipment (machines, etc.) available.

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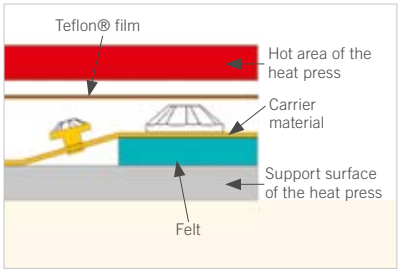
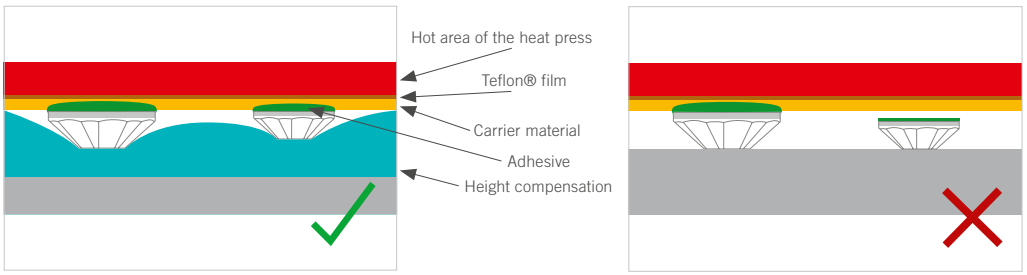
Too much pressure can cause the adhesive to be spread out and can also affect the surface of the carrier material. Too little pressure, however, can result in a weak and insufficient bond between the crystal and the carrier material.

In general, the pressure should be applied **directly to the crystal elements** (e.g. Flat Backs Hotfix, Transfers, Crystal Mesh).
It is therefore necessary to check if there are any buttons, zippers or other raised parts surrounding them. Always use a **compensating pad** to even out the surface.

Jean pocket



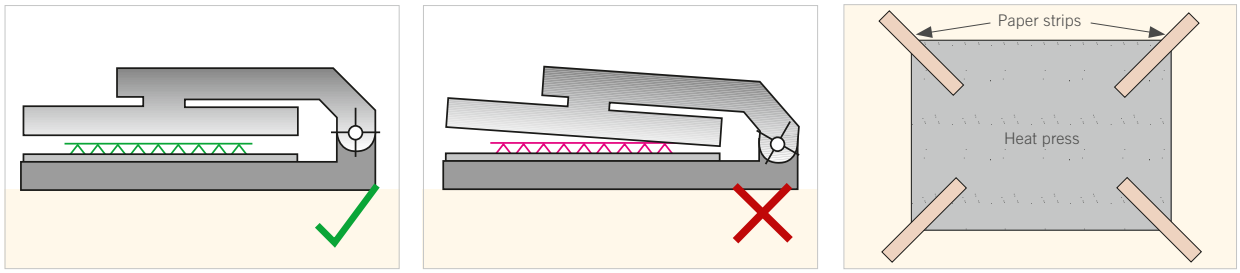
When applying SWAROVSKI ELEMENTS of different heights, a **compensating pad** should always be used. Silicone foam or foam rubber can be used here.



Height compensation with different Hotfix elements

The parallel plane of the heat press

Take great care to apply pressure evenly when using a heat press with a scissor mechanism. The upper plate of the heat press must be completely horizontal in order to effectively and evenly distribute pressure and temperature. ?!



Checks should always be carried out to make sure the plates are parallel. This can be done by placing paper test strips into the press and closing it with the least possible pressure. After this, if it takes the same force to pull out each strip, the plates are parallel.

Application time

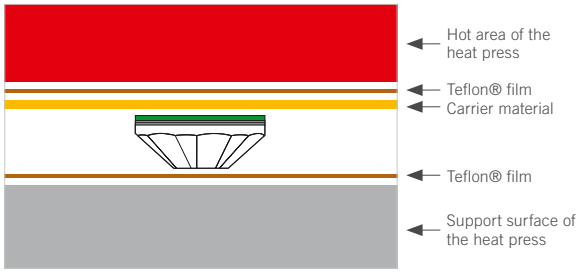
In general, the application time should be sufficient to allow the hot-melt glue to be fully activated, and then to penetrate the carrier material.
The application time necessary depends on the Hotfix elements, the temperature selected, the machine used, the carrier material and the application side.

A detailed summary can be found in the Hotfix Selector table at the end of this chapter. Please note that the times stated are intended as a guideline. When adapting them to your application, it is recommended to carry out tests on the original material.

Application side

Hotfix elements can usually be applied from the front and the back. A shorter application time can be achieved with thinner fabrics by applying crystals from the back, as the heat reaches the adhesive through the carrier material faster, activating it immediately. ?!

Application from the back

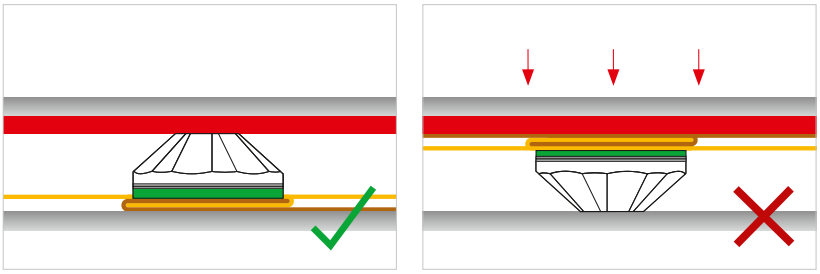


Rear (reverse) side of fabric is exposed to heat

Application from the front

Front (right) side of fabric is exposed to heat

When applying Hotfix products on **thick or multi-layered** fabrics (such as seams) the application side selected should be the one that allows the heat to be transferred to the hot-melt adhesive quickest. This ensures fast, optimum activation.



Selecting the optimum application side

Note that the shape and size (causing irregular temperature penetration) of many items (e.g. Pearls, Creation Stones Plus) will only allow an application **from the back**. Further information can be found in the Hotfix Selector table at the end of this chapter.

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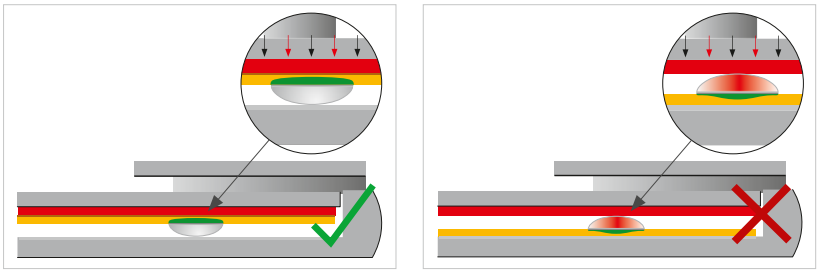

Certain SWAROVSKI ELEMENTS can only be applied from the back.

Defining the optimum application parameters

Adhesive has been successfully activated when, using a magnifying glass, it is possible to see a thin edge of glue formed around the crystal. On thin fabrics, the optimum application parameters are chosen when the glue will have lightly penetrated through the fabric and is lightly visible at the reverse.

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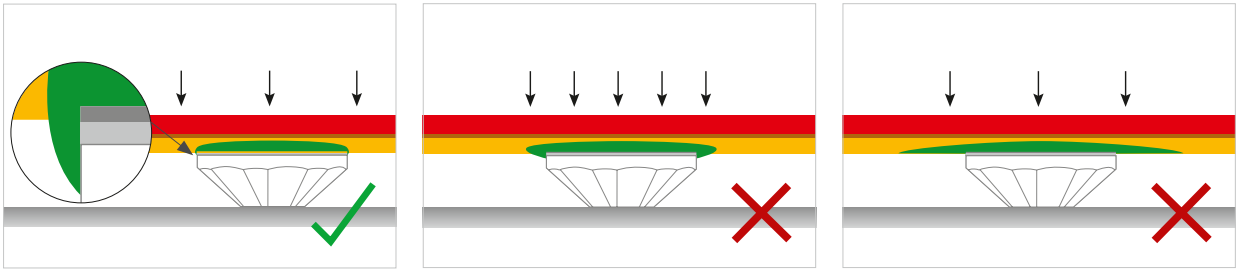


Optimum application result

Huge excess of glue – too much pressure exerted with heat press

Huge excess of glue – heat press temperature too high, or applied too long

When parameters have been incorrectly selected, such as an extreme application temperature, pressure, or application time, significant amounts of glue can spread out.

When the application temperature or pressure is too low, or the application time too short, the adhesive cannot be sufficiently activated, leading to problems with adhesion.

Application using a heat press

A heat press is the ideal tool for applying Hotfix products as it can be used to apply even, adjustable pressure. All SWAROVSKI ELEMENTS mentioned in the product overview can be applied using the following steps. Please also note the helpful hints concerning the application of Crystal Mesh and Diamond Transfers.

To adjust the application parameters and the aids to achieve an ideal balance, it is strongly recommended that tests are carried out with the original material.

1 Peel off the white protective film*.

2 Place the product in the desired position.

3 Make sure to apply the elements from the recommended side and use the correct pressing aid. To protect the heating surfaces from any glue residue, it is best to cover them with Teflon® film.

4 After the pressure, time and temperature is set, close the heat press.

5 After the application is finished, use a pressing cloth to apply additional pressure to the product.

6 Once the product is at least hand warm, the transparent film can be removed at an acute angle.

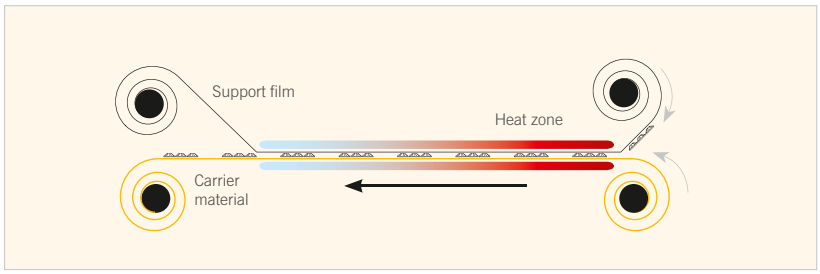
* Not all Hotfix products are provided with a protective or support film (e.g. Crystaltex).

If adhesion is insufficient following the application process, it can be repeated, adjusting the parameters (such as pressure, time and temperature). Please ensure that the application process is repeated from the very beginning, and that the initial application time is combined with the additional time. ?!

For example: After application, it is clear that the application time of 10 seconds was insufficient. Pressure should not just be applied for a further 5 seconds—the process must be repeated in its entirety, with an application time of 15 seconds.

Application using a continuous fusing press

Transfers, Transfers on Roll, and other Hotfix Banding variants can be applied using a continous fusing press. This type of application offers a simple, efficient way of joining the carrier material and the Hotfix product as part of a continuous application process.



Continuous fusing press operation

With most continuous fusing presses, heat is generated on both sides. The speed of the press, pressure and temperature should be selected to ensure that the time in the heat zone corresponds to the figures in the Hotfix Selector table (see the end of this chapter). This time can be calculated using the length of the heat zone and the speed selected.

Application using an ultrasonic device

XILION Flat Backs Hotfix in sizes SS 6 – SS 34 can be quickly and easily applied using an ultrasonic device, with high-quality results. In this process, the hot-melt adhesive is activated via **friction heat**, created through the quick vibrations and simultaneous pressing down of the Flat Backs on to the carrier material.
A device with a vacuum pump is best for correctly positioning the crystals. Alternatively, they can also be positioned using transfer film or tweezers, and then applied via ultrasound.

The frequency of the ultrasonic device must be precisely set according to the manufacturer's instructions.
Some manufacturers also offer devices with automatic frequency setting. The application time is then selected according to pretests.

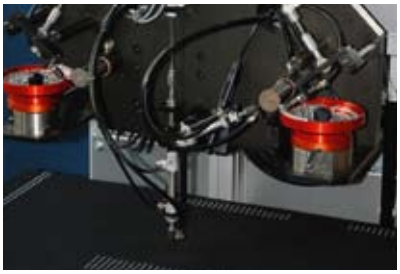
1 Choose an adapter to match the size of the crystal.

2 Position the crystal on the carrier material, which should be resting on a solid base (e.g. glass, metal).

3 Press the adapter firmly onto the crystal at a perpendicular angle and activate the device.

Application using a stone setting machine

Hotfix crystals can be secured with a stone setting machine using either ultrasound or heat. The feed and application of the crystals is either fully or semi-automatic.



Stone setting machine

Application using an applicator

Applicators are a cost-effective way to apply XILION Flat Backs Hotfix (SS 6 to 34) onto the carrier material.

1 Choose an applicator point to match the size of the crystal, so that the crystal cannot tilt out of place.

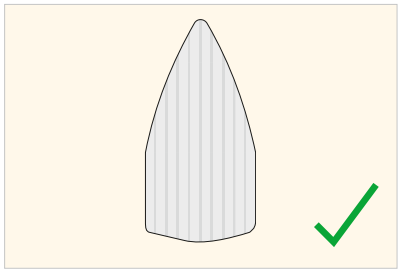
2 Heat the applicator to a suitable temperature and pick up the crystal.

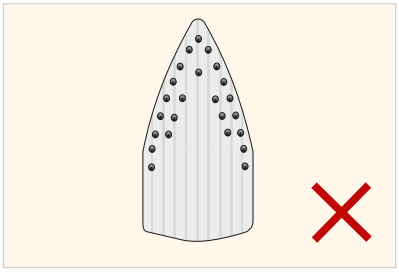
3 As soon as the Hotfix adhesive on the rear of the crystal has melted, position the element on the carrier material, which should be resting on a solid base (e.g. glass, metal).

Application using an iron

In general, an iron can be used for the application of all Hotfix elements. However, as pressure and temperature can only be controlled to a **limited extent,** the use of a heat press is recommended.

Always make sure that there are no **steam vents** on the soleplate of the iron. Pressure cannot be applied at these vents, and water droplets and steam have a negative effect on the application results. Always iron on a firm, flat and even base.





Explanation of dot system according to DIN EN ISO 3758

- • Soleplate temperature 110°C (230°F)
- •• Soleplate temperature 150°C (302°F)
- ••• Soleplate temperature 200°C (392°F)

1 Select symbol •• (max. 150°C/302°F).

2 Use felt or cardboard to prevent the crystal elements from marking the fabric.

3 A Teflon® underlay protects the soleplate of the iron from any glue residue.

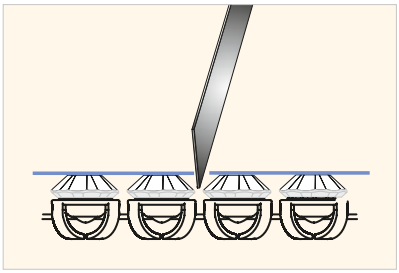
Hot-melt adhesive generally requires 24 hours to cure completely. Any washing or quality assurance should take place after this period.

Pre-cut fabric

Experience has shown that the best results are obtained with applications on pre-cut fabric. In order to obtain optimum adjustment of all application parameters, advance testing on the materials to be used is strongly recommended before production begins.

Cutting Crystal Mesh

Before Hotfix application, the transparent film must not be removed. The film allows the individual crystals to be aligned perfectly, and provides Crystal Mesh with the stability necessary for flawless application.

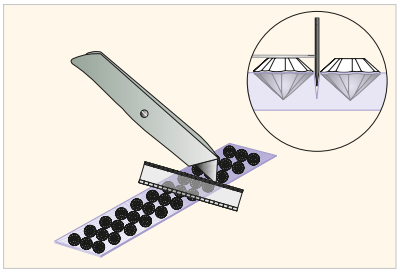


1 Cut between the rows of crystals with a Stanley knife, but do not pull them apart, otherwise the stability of the crystals will be lost.

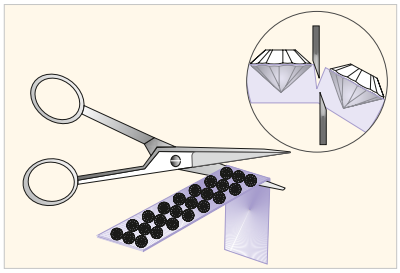
2 Cut the metal mesh with scissors along the scored line, and remove the excess link rings. The Crystal Mesh is now ready for Hotfix application.

Cutting Crystaltex Chaton Bandings

When working with Crystaltex Chaton Bandings, the lack of space between crystals means great care must be taken during cutting, so as to avoid any damage.



1 Cut into the carrier material between the crystal rows with a Stanley knife.



2 Snap and cut off the Crystaltex Chaton Banding along the scored edge.

Avoiding film marks

Undesired film marks on sensitive fabrics can be avoided by cutting the transparent film close **to the edge of the motif**. Apply the product for a short time, using a small amount of pressure. Then remove the transparent film and press again following the recommended time and pressure settings.

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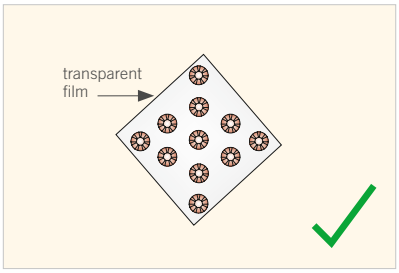
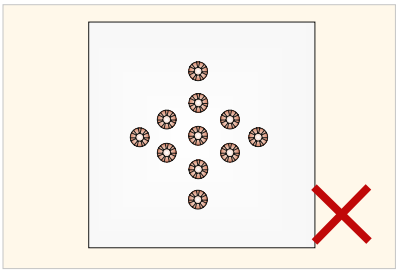
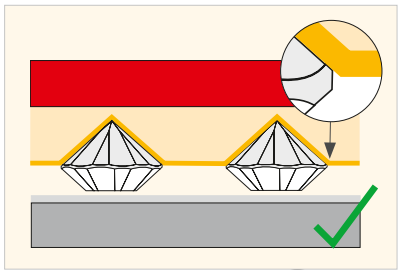




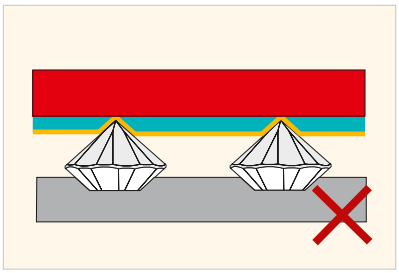
If the film has already left marks, the surface structure of the carrier material can usually be restored by brushing, using a steam iron or by re-pressing it in the heat press.

Application instructions for Diamond Transfers

When applying Diamond Transfers (Transfers with high-brilliance XILION Chatons), a **soft, compensating underlay** (e.g. silicone pad) should always be used. This soft pad encloses the crystal points, and allows the optimum distribution of pressure, thus improving the bond between the carrier material and the Diamonds (adhesion right up to the girdle). Cardboard prevents the crystals from sinking into the soft support surface of the heat press, and ensures the proper application of pressure.



A soft silicone pad offers optimum distribution of pressure and allows adhesion right up to the girdle.



Without a pressure compensator, adhesion only occurs at the contact points with the heated plate.

Hotfix application on other materials

The Hotfix glue was specially developed for use with textiles. However, experience shows that Hotfix applications can also be carried out on other materials such as wood, paper or metal. In such cases it is very important to carry out application tests beforehand, and to check the surface properties (see surface tension in the “Gluing” chapter).

QUICK ASSISTANCE

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The following table outlines common problems and their causes when applying Hotfix elements, and offers advice on how to avoid them. Further details and more extensive descriptions can be found in the section marked with a ?!

PROBLEM	CAUSE
The product does not adhere to the fabric.	**1, 2, 3, 4, 5, 6**
Glue is oozing out around the crystals.	**7, 8, 9, 10**
The support film leaves marks on delicate fabrics.	**7, 8, 9, 10, 11, 12**
The product does not adhere to seams or multi-layered fabric.	**1, 2, 3, 4, 5, 6, 13**

CAUSE		RECOMMENDATION
1	The application temperature is too low.	Increase the temperature to at least 120°C (250°F). See the Hotfix Selector table for further assistance.
2	Uneven distribution of heat on the heated surface.	Check the temperature with a temperature measuring strip or a laser measuring device, and set up the heat press again.
3	The application time is too short.	Increase application time; it takes longer for the heat to activate the Hotfix glue on layered fabric and seams; if necessary apply from the front. See the Hotfix Selector table for further assistance.
4	The pressure is too low.	Thick fabrics and certain products need higher pressure. See the Hotfix Selector table for further assistance.
5	The heat press does not close evenly.	Adjust the heat press.
6	The ironing pad is unsuitable.	Carry out tests with different ironing pads to establish the most suitable.
7	The temperature is too high.	Choose a lower temperature, between 120°C and 170°C (250°F–340°F). See the Hotfix Selector table for further assistance.
8	The application time is too long.	Reduce the application time. See the Hotfix Selector table for further assistance.
9	The pressure is too high.	Reduce the pressure on the heat press. See the Hotfix Selector table for further assistance.
10	The ironing pad is too hard.	Use a soft silicone pad.
11	The fabric is extremely sensitive.	Iron the fabric with a steam iron.
12	The transparent support film leaves marks.	Cut away more of the film, closer to the edge of the motif, to reduce marking.
13	Hotfix elements are not being affected by the heat plate.	Balance out the different thicknesses of seams, buttons, zippers etc. by using pieces of felt, which have been cut to exactly the right size and placed under the Hotfix element.

SWAROVSKI HOTFIX SELECTOR

The Hotfix Selector table contains information on the application parameters

- temperature
- pressure
- application time
- application side

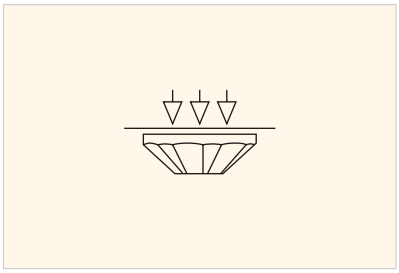
for various SWAROVSKI ELEMENTS and material combinations. The figures given are for Hotfix application using a heat press.

Note: The temperature/time combinations in the Hotfix Selector table are only guidelines. Pressure cannot be specified more exactly, as this depends on the setting options of the press closure system (manual, pneumatic, hydraulic or electromagnetic). In all cases, tests should be carried out from the start of production, to ensure the ideal combination of settings for the design. The figures listed are valid until further notice.

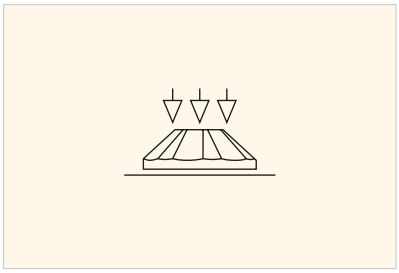
Transfers	XILION Transfers	Transfers with XILION Flat Backs Hotfix (Art. 2028 and 2029)
	Creation Transfers	Transfers combined with Creation Stones (Art. 2200, 2300, 2400, 2510, 2512/3, 2610, 2711, 2728) or Pearl Cabochons
	Creation Transfers PLUS	Transfers combined with Creation Stones PLUS (Art. 2493, 2555, 2720, 2770, 2035, 2520)
	Pearl Transfers	Transfers with Pearls
	Diamond Transfers	Transfers with Diamonds
	Metallic Transfers	Transfers with Metallics
	Mezzo Transfers	Metallic Transfers combined with XILION Flat Backs, Pearls or Creation Stones
	Crystaltex Motives Transfers	Transfers with Crystaltex Motives
Synthetics Hotfix	Crystal Fabric	
	Crystal Rocks	
	Crystal Transfabric	
	Crystaltex Bandings	
	Crystaltex Chaton Bandings	
Crystal Mesh	Crystal Mesh Standard	
	Crystal Mesh XL	
	Crystal Mesh Metallisée	
	Crystal Pearl Mesh	
	Crystal Aerial Mesh	

FABRIC CATEGORY	FABRIC EXAMPLE	MATERIAL	WEIGHT
Reference fabric	Cotton/polyester blend	65% cotton, 35% polyester	190 g/m²
Natural fibers	Batiste, Vichy fabric, cotton jersey, interlock, linen fabrics, etc.	Cotton, linen	100–200 g/m²
	Silk fabrics, toile, etc.	Silk	100–200 g/m²
	Jeans, denim, cord, velvet, damask, gabardine, sweatshirt fabrics, etc.	Cotton	300–400 g/m²
	Cloth, tweed, bouclé, loden, boiled wool, felt, knitted fabrics, etc.	Wool	300–400 g/m²
Cellulose and synthetic fibers	Viscose, satin, organza, chiffon, taffeta, tulle, lace, etc.	Viscose, acetate, triacetate, polyester, polyamide, polyacrylics and various fiber blends	20–120 g/m²
	Lycra, neoprene, etc.		150–250 g/m²
Pile fabrics	Artificial leather, alcantara, suede, fleece, artificial fur, plush, toweling, etc.	Cottons, various fiber blends	200–350 g/m²

As most SWAROVSKI ELEMENTS can be applied from the front or back, the Hotfix Selector table features the application parameters both for the **recommended** and the **alternative application side.** Extensive information on optimum application, depending on the production process and the application type (e.g. on trouser pockets), is available.



Back: The back (reverse) of the fabric is exposed to the heat press.



Front: The front (right side) of the fabric is exposed to the heat press.

A shorter application time is usually required when applying from the back. The temperature settings selected depend on the heat resistance of the carrier material, and should be judged by the customer. The higher the temperature, the less time is required to activate the Hotfix adhesive (see table/chart). The application time depends primarily on the textile used and its thickness.

Aids

Teflon® (100x50 cm, 40x20 inches, Art. 9010/003)
Silicone foam (134x100 cm, 54x40 inches, Art. 9010/002)
Felt (100x100 cm, 40x40 inches, Art. 9010/001)
Silicone pad (50x50x0.2 cm, 20x20x0.08 inches, Art. 9010/005)
Standard pressing cloth (cotton)
Normal cardboard
Transfer film (www.nundh.com)

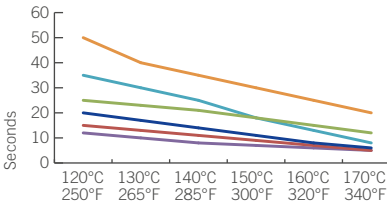
RECOMMENDED APPLICATION SIDE

ALTERNATIVE APPLICATION SIDE

XILION TRANSFERS

	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	20	17	14	11	8	6
Silk, batiste, cotton jersey, thin linen fabrics, etc.	15	13	11	9	7	5
Jeans, cord, loden, cloth, knitted fabrics, etc.	25	23	21	18	15	12
Viscose, satin, chiffon, organza, taffeta, etc.	12	10	8	7	6	5
Lycra, neoprene, etc.	35	30	25	18	13	8
Artificial fur, artificial leather, fleece, suede, etc.	50	40	35	30	25	20

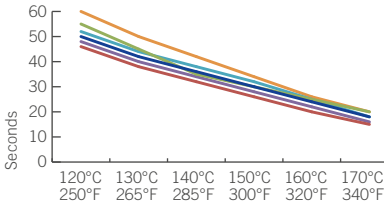
Pressure: low
Aids: Teflon®, pressing cloth, silicone foam



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	50	42	36	30	24	18
Silk, batiste, cotton jersey, thin linen fabrics, etc.	46	38	32	26	20	15
Jeans, cord, loden, cloth, knitted fabrics, etc.	55	45	35	30	25	20
Viscose, satin, chiffon, organza, taffeta, etc.	48	40	34	28	22	16
Lycra, neoprene, etc.	52	44	38	32	25	18
Artificial fur, artificial leather, fleece, suede, etc.	60	50	42	34	26	20

Pressure: low
Aids: Teflon®, pressing cloth, silicone foam

Note: The application time depends primarily on the size of the crystal. To offer an average, figures are given for crystal size SS 20 (Art. 2028).

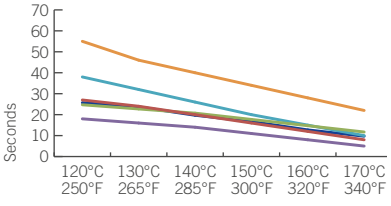


CREATION TRANSFERS, PEARL TRANSFERS, METALLIC TRANSFERS & MEZZO TRANSFERS

Pearl Transfers are **NOT** suitable for application from the front!

	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	25	23	19	16	12	9
Silk, batiste, cotton jersey, thin linen fabrics, etc.	27	24	20	16	12	8
Jeans, cord, loden, cloth, knitted fabrics, etc.	25	23	21	18	15	12
Viscose, satin, chiffon, organza, taffeta, etc.	18	16	14	11	8	5
Lycra, neoprene, etc.	38	32	26	20	15	10
Artificial fur, artificial leather, fleece, suede, etc.	55	46	40	34	28	22

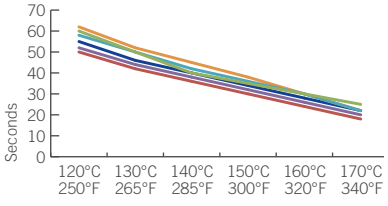
Pressure: medium
Aids: Teflon®, pressing cloth, silicone foam



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	55	46	40	34	28	22
Silk, batiste, cotton jersey, thin linen fabrics, etc.	50	42	36	30	24	18
Jeans, cord, loden, cloth, knitted fabrics, etc.	60	50	40	35	30	25
Viscose, satin, chiffon, organza, taffeta, etc.	52	44	38	32	26	20
Lycra, neoprene, etc.	58	50	42	36	30	22
Artificial fur, artificial leather, fleece, suede, etc.	62	52	45	38	30	22

Pressure: medium
Aids: Teflon®, pressing cloth, silicone foam

Note: The application time depends primarily on the largest element in the motif.



RECOMMENDED APPLICATION SIDE

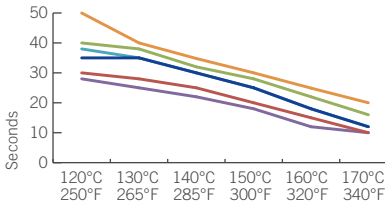
ALTERNATIVE APPLICATION SIDE

These items are **NOT** suitable for application from the front!

CREATION TRANSFERS PLUS

	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	35	35	30	25	18	12
Silk, batiste, cotton jersey, thin linen fabrics, etc.	30	28	25	20	15	10
Jeans, cord, loden, cloth, knitted fabrics, etc.	40	38	32	28	22	16
Viscose, satin, chiffon, organza, taffeta, etc.	28	25	22	18	12	10
Lycra, neoprene, etc.	38	35	30	25	18	12
Artificial fur, artificial leather, fleece, suede, etc.	50	40	35	30	25	20

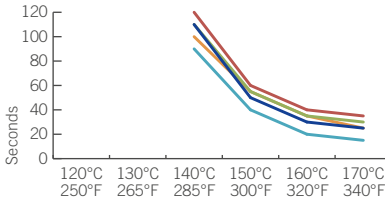
Pressure: medium
Aids: Teflon®, pressing cloth



DIAMOND TRANSFERS

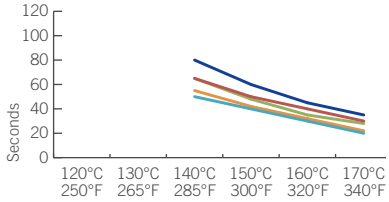
	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	110	50	30	25
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	120	60	40	35
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	110	55	35	30
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	–	–	–	–
Lycra, neoprene, etc.	–	–	90	40	20	15
Artificial fur, artificial leather, fleece, suede, etc.	–	–	100	55	35	25

Pressure: high
Aids: Teflon®, pressing cloth, cardboard, preheated silicone pad
Note: Diamond Transfers are best suited to soft, voluminous fabrics.



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	80	60	45	35
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	65	50	40	30
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	65	48	35	28
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	–	–	–	–
Lycra, neoprene, etc.	–	–	50	40	30	20
Artificial fur, artificial leather, fleece, suede, etc.	–	–	55	42	32	22

Pressure: high
Aids: Teflon®, pressing cloth, cardboard, preheated silicone pad
Note: Diamond Transfers are best suited to soft, voluminous fabrics.



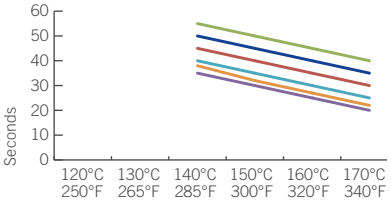
RECOMMENDED APPLICATION SIDE

ALTERNATIVE APPLICATION SIDE

CRYSTAL FABRIC, CRYSTALTEX TRANSPARENT, CRYSTALTEX CHATON BANDINGS & CRYSTAL TRANSFABRIC

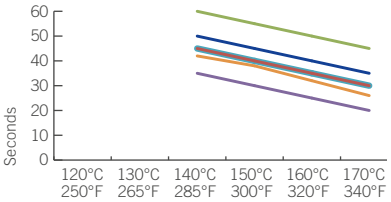
	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	50	45	40	35
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	45	40	35	30
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	55	50	45	40
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	35	30	25	20
Lycra, neoprene, etc.	–	–	40	35	30	25
Artificial fur, artificial leather, fleece, suede, etc.	–	–	38	32	27	22

Pressure: medium
Aids: Teflon®, pressing cloth



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	50	45	40	35
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	45	40	35	30
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	60	55	50	45
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	35	30	25	20
Lycra, neoprene, etc.	–	–	45	40	35	30
Artificial fur, artificial leather, fleece, suede, etc.	–	–	42	38	32	26

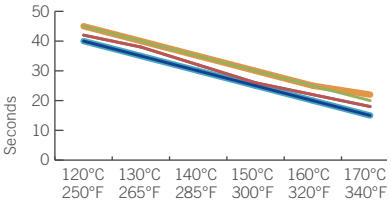
Pressure: medium
Aids: Teflon®, pressing cloth



CRYSTALTEX BANDINGS & CRYSTALTEX MOTIVES

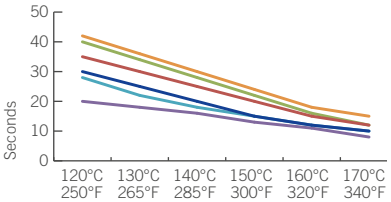
	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	40	35	30	25	20	15
Silk, batiste, cotton jersey, thin linen fabrics, etc.	42	38	32	26	22	18
Jeans, cord, loden, cloth, knitted fabrics, etc.	45	40	35	30	25	20
Viscose, satin, chiffon, organza, taffeta, etc.	42	38	32	26	22	18
Lycra, neoprene, etc.	40	35	30	25	20	15
Artificial fur, artificial leather, fleece, suede, etc.	45	40	35	30	25	22

Pressure: medium
Aids: Teflon®, pressing cloth



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	30	25	20	15	12	10
Silk, batiste, cotton jersey, thin linen fabrics, etc.	35	30	25	20	15	12
Jeans, cord, loden, cloth, knitted fabrics, etc.	40	34	28	22	16	12
Viscose, satin, chiffon, organza, taffeta, etc.	20	18	16	13	11	8
Lycra, neoprene, etc.	28	22	18	15	12	10
Artificial fur, artificial leather, fleece, suede, etc.	42	36	30	24	18	15

Pressure: medium
Aids: Teflon®, pressing cloth



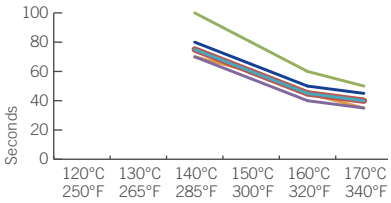
RECOMMENDED APPLICATION SIDE

ALTERNATIVE APPLICATION SIDE

CRYSTAL ROCKS

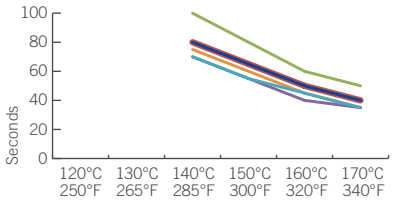
	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	80	65	50	45
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	75	60	45	40
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	100	80	60	50
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	70	55	40	35
Lycra, neoprene, etc.	–	–	75	60	45	40
Artificial fur, artificial leather, fleece, suede, etc.	–	–	70	60	45	35

Pressure: medium
Aids: Teflon®, pressing cloth



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	80	65	50	40
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	70	55	45	35
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	100	80	60	50
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	70	55	40	35
Lycra, neoprene, etc.	–	–	80	65	50	40
Artificial fur, artificial leather, fleece, suede, etc.	–	–	75	60	45	35

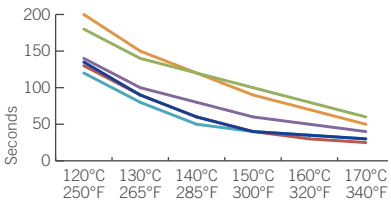
Pressure: medium
Aids: Teflon®, pressing cloth



CRYSTAL MESH (STANDARD, AERIAL, METALLISÉE, CERAMICS)

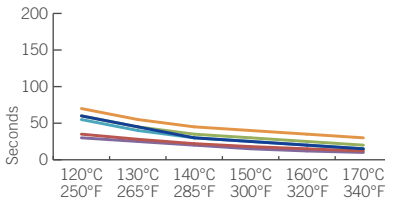
	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	135	90	60	40	35	30
Silk, batiste, cotton jersey, thin linen fabrics, etc.	130	90	60	40	30	25
Jeans, cord, loden, cloth, knitted fabrics, etc.	180	140	120	100	80	60
Viscose, satin, chiffon, organza, taffeta, etc.	140	100	80	60	50	40
Lycra, neoprene, etc.	120	80	50	40	35	30
Artificial fur, artificial leather, fleece, suede, etc.	200	150	120	90	70	50

Pressure: high
Aids: Teflon®, pressing cloth



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	60	45	30	25	20	15
Silk, batiste, cotton jersey, thin linen fabrics, etc.	35	28	22	18	15	12
Jeans, cord, loden, cloth, knitted fabrics, etc.	60	45	35	30	25	20
Viscose, satin, chiffon, organza, taffeta, etc.	30	25	20	15	12	10
Lycra, neoprene, etc.	55	40	30	25	20	15
Artificial fur, artificial leather, fleece, suede, etc.	70	55	45	40	35	30

Pressure: high
Aids: Teflon®, pressing cloth, transfer film to fix in place



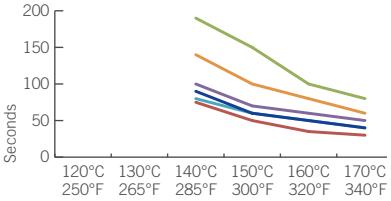
RECOMMENDED APPLICATION SIDE

ALTERNATIVE APPLICATION SIDE

CRYSTAL MESH XL, CRYSTAL PEARL MESH

	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	–	–	90	60	50	40
Silk, batiste, cotton jersey, thin linen fabrics, etc.	–	–	75	50	35	30
Jeans, cord, loden, cloth, knitted fabrics, etc.	–	–	190	150	100	80
Viscose, satin, chiffon, organza, taffeta, etc.	–	–	100	70	60	50
Lycra, neoprene, etc.	–	–	80	60	50	40
Artificial fur, artificial leather, fleece, suede, etc.	–	–	140	100	80	60

Pressure: high
Aids: Teflon®, pressing cloth



	Temperature/time required (in seconds)					
	120°C 250°F	130°C 265°F	140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F
Reference fabric	60	45	30	25	20	15
Silk, batiste, cotton jersey, thin linen fabrics, etc.	35	28	22	18	15	12
Jeans, cord, loden, cloth, knitted fabrics, etc.	60	45	35	30	25	20
Viscose, satin, chiffon, organza, taffeta, etc.	30	25	20	15	12	10
Lycra, neoprene, etc.	55	40	30	25	20	15
Artificial fur, artificial leather, fleece, suede, etc.	70	55	45	40	35	30

Pressure: high
Aids: Teflon®, pressing cloth