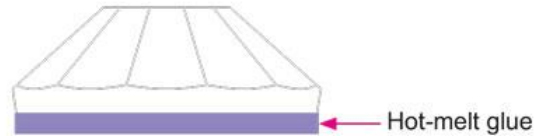


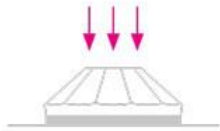
Hot Fixing the Stones

Basic principles

Hotfix stones have a glue layer on their back side. The heat-activated glue melts and turns liquid after being heated and returns into a solid state after cooling.



Procedure



Application



Cooling

It takes about 5 minutes for the glue to cool down after the application. After this time, the stones are fixed to the base material.



Curing

The glue should cure for 24 hours to get firm and durable. Do not handle or wash the textile material during this period.



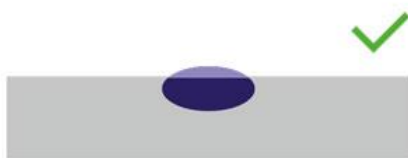
Care

Textile material with applied stones can be washed at 60 °C, tumble-dried, dry-cleaned and carefully ironed.

Material qualities for the application of Hotfix stones

ABSORPTION QUALITIES OF THE MATERIAL

A firm bond between the hotfix stone and the base material can only be achieved if at least part of the heat-activated glue soaks into the used base material. Test in advance the absorption qualities of the chosen material using water.



Good absorption qualities
– the droplet soaks into the material



Bad absorption qualities – the droplet stays on the material surface

Unsuitable base materials and surface treatments

- ✗ Teflon surface treatments.
- ✗ Treatments increasing the dirt resistance.
- ✗ Some dyes (dyes with metal pigments).
- ✗ Enzymatic treatments.
- ✗ Treatments for easy maintenance.
- ✗ Very soft materials, e.g. organdie.
- ✗ Very compact textile materials.
- ✗ Hydrophobic or water repellent treatments (silicon or synthetic rubber as water repellents).
- ✗ Treatments with fluorinated hydrocarbons
- ✗ Treatments with softening agents.
- ✗ Smooth leather and smooth leather imitations



Bad absorption qualities of the material caused by improper surface treatments (softening agents in particular) can be sometimes eliminated by washing the material prior to hotfix stone application.



APPLICATION WITH A MANUAL APPLICATOR

A manual applicator is a cheap way of applying Hotfix MC Chaton Roses on the base material.

Advantage:

- ✓ Low purchase price.



Note:

When using the manual applicator it is necessary to carefully follow the producer's instructions (temperature setting).

The application time is then set according to the previous tests with particular stones and base material.

Application procedure



- 1 Choose an adapter to match the stone size and put it on the applicator.
- 2 Heat the applicator to the required temperature and pick up a stone.



- 3 Place the clothes on an appropriate pad (glass, ceramics, metal) and press on the stone

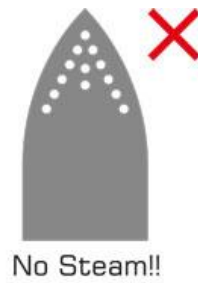
APPLICATION WITH AN IRON

Advantage:

- ✓ A normal iron can be used to apply all Hotfix stones – best results an iron without steam slots.

Disadvantage:

- ✗ An application with an iron does not always bring the best results. It is recommended to use a heat press to achieve an optimum fix.



Warning:

The pressure and temperature regulations are not accurate

- The accuracy of the pressure regulation depends on the individual pressing the stones
- It is extremely important that the iron is dry. Absolutely no steam should be present as this can make application impossible.
- Always carry out the application on a firm, flat and even pad.

Application Procedure



1 The optimal temperature of the ironing surface is 150 °C (300 °F).



2 Put a cardboard or a felt pad under the cloth.



3 Stones should be covered with a thin cloth during the application to protect the iron from staining by the glue. Lean on the iron to lend the stone some pressure.



4 Check the applied stones. If not fixed firmly repeat the process.

APPLICATION WITH A HEAT PRESS

Advantages:

- ✓ Uniform and adjustable pressure on the stones.
- ✓ Setting of accurate temperature and time.
- ✓ High efficiency of application.

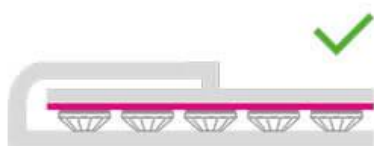


Helpful tips:

Teflon or silicon foil. The foil avoids staining or sticking of the reverse side to the front side of the textile in case the glue soaks through where the stones are applied.

Parallel position of the heat press plates

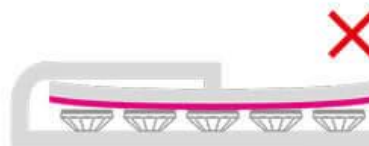
The upper and lower press plates should be in a parallel position which enables the pressure and temperature to be evenly distributed over the whole pressing area. The stones can be thus applied in a right way



Plates are parallel – pressure and temperature are same everywhere

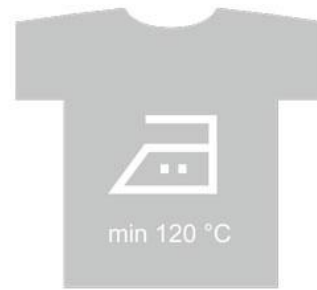


Plates are not parallel – pressure and temperature are not same everywhere



HEAT RESISTANCE OF THE MATERIAL

Before starting the application make sure that the base material is ok for using Hotfix technology with a heat resistance. The heat resistance of the material should be at least 120 °C / 250 °F.



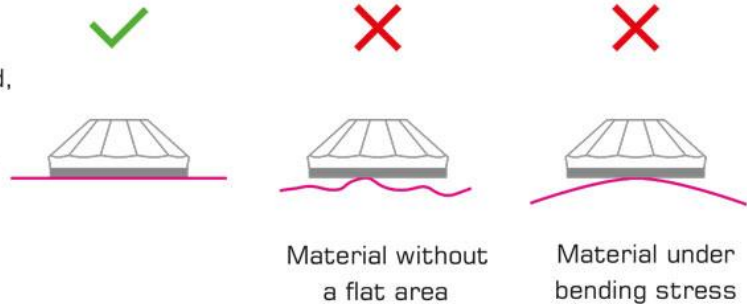
PRESSURE RESISTANCE

The material should be resistant to the pressure used with the equipment for stone applications. A deformation of the material can occur under excessive pressure. Test the pressure in advance on a sample.



SHAPE OF THE BASE MATERIAL

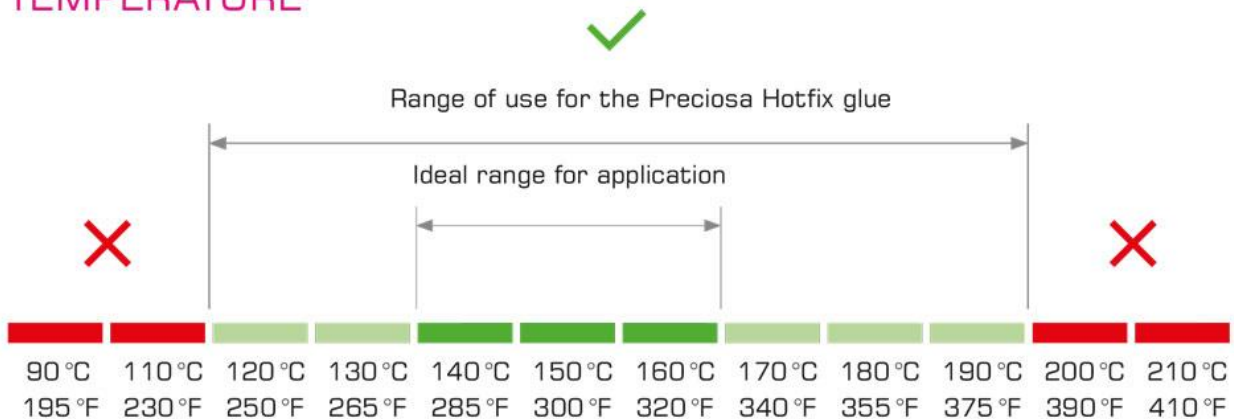
Base material without a flat area (rounded, dome-shaped surface) or under bending stress in the application area (e.g. shoes, zippers) is not suitable for applying big stones in particular.



Technological parameters for the application of Hotfix stones

The choice of temperature, time and pressure is very important for a successful stone application. All these features are influenced both by the base material qualities and stone sizes.

TEMPERATURE



The temperature distribution in the heat press



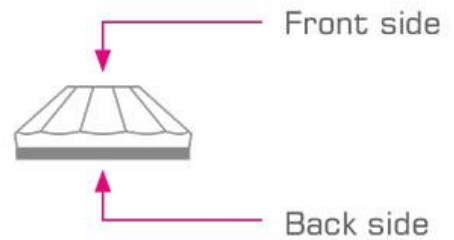
The heat is evenly distributed in the whole plate of the heat press

The heat is not evenly distributed in the plate of the heat press

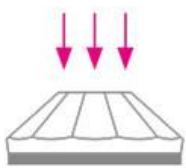
APPLICATION TIME

The application time has to be long enough for the glue to melt appropriately and soak into the base material. Qualities of the base material, size and shape of the stone, used equipment and stone orientation – stones can be applied with their front or back side exposed to the heat – influence the application quality.

Stone orientation



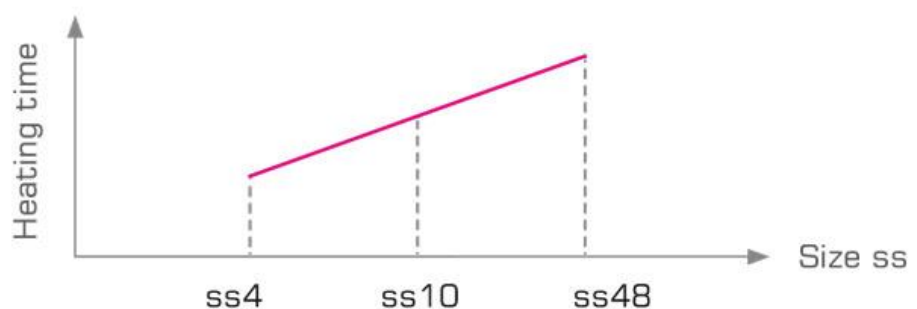
Overview of temperature and time combinations for different material (Hotfix ss10)



Front side (ss10)

Material	Weight (g/m ²)	Time (sec.)							
		140°C 285°F	150°C 300°F	160°C 320°F	170°C 340°F	180°C 355°F	190°C 375°F	200°C 390°F	
Reference Fabric (100% Cotton)	120 – 150	38	32	25	20	17	14	12	
Cotton jersey (100% Cotton)	130 – 170	38	32	25	20	17	13	11	
Linen	170 – 210	40	35	28	23	18	13	10	
Silk fabrics	30 – 50	40	32	25	20	17	13	10	
Jeans (87% Cotton)	250 – 290	40	35	28	23	18	14	12	
Wool – felt	330 – 370	42	35	28	23	18	15	12	
Viscose	100 – 120	40	35	30	25	20	18	17	
Chiffon	40 – 60	41	35	29	24	20	15	12	
Lace (PES 100%)	80 – 100	42	35	28	23	18	16	14	
Lycra	180 – 220	45	37	30	25	20	16	12	
Taffeta (PES 100%)	230 – 270	45	37	30	25	20	16	14	
Fleece (PES 100%)	200 – 220	42	37	30	25	20	16	14	

Time of heating depending on the chaton rose size



Important advice and information

POSSIBLE PROBLEMS, THEIR CAUSES AND RECOMMENDATIONS

PROBLEM	CAUSE
The stone does not adhere to the base material.	1, 2, 3, 4, 5, 6
The glue spreads around the stone.	7, 8, 9, 10
The stone does not hold on seams or layered materials.	1, 2, 3, 4, 5, 6

CAUSE	RECOMMENDATION
1 The application temperature is too low.	Increase the temperature by 10 °C (20 °F) at least.
2 The application time is too short.	Prolong the application time. In case of a thick or multilayer material apply the heat from the front side through the stone.
3 The pressure is too low.	It can occur by application on a thick material. Increase the pressure.
4 Uneven distribution of heat on the heated surface	Check the temperature with a measuring tape or a laser thermometer. If the difference is higher than 5°C (10 °F) repair the heat press.
5 The heat press closes askew.	Repair the heat press.
6 The application pad is not suitable.	Test different application pads and choose the most suitable one
7 The application temperature is too high	Lower the temperature by 20 °C (40 °F) at least.
8 The application time is too long.	Shorten the application time.
9 The pressure is too high.	Decrease the pressure of the heat press.
10 The application pad is too hard.	Use a softer application pad.