

SWAROVSKI

APPLICATION MANUAL 2016

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Swarovski is the premium brand for the finest crystal embellishments since 1895. It is recognized for its innovative excellence and its collaborations with top-class designers and brands in the fashion, jewelry, accessories, interior design, and lighting industries across the globe.

Available in myriad colors, effects, shapes, and sizes, crystals from Swarovski offer designers a fabulous palette of inspiration, and are produced according to the innovative, lead-free* Advanced Crystal standard. Born out of a passion for detail and high-precision cutting, these precious ingredients impart refined glamour to everything they embellish. They can be recognized by the 'Crystals from Swarovski' seal, which serves as a certificate of authenticity that identifies products made with genuine Swarovski crystals.

A family-owned company for more than 100 years, with values rooted in integrity, respect, and excellence, Swarovski is noted as much for its ethics in business as for its contemporary artistry and innovative flair.

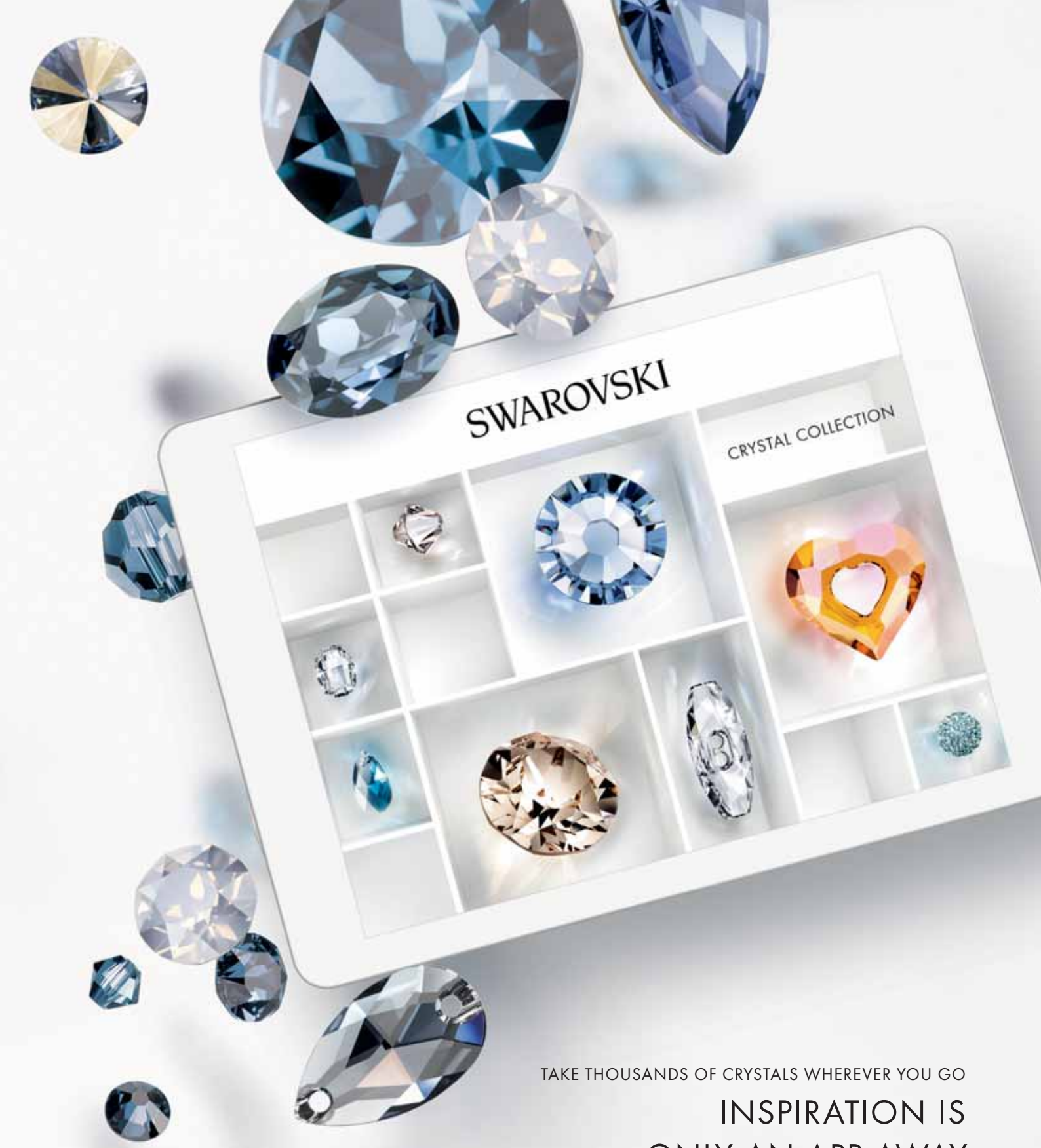
[SWAROVSKI.COM/PROFESSIONAL](https://www.swarovski.com/professional)

* Crystal glass and all other materials containing 0.009% lead or less.



SEAL YOUR SUCCESS

Be part of our exclusive Ingredient Branding program



TAKE THOUSANDS OF CRYSTALS WHEREVER YOU GO

INSPIRATION IS ONLY AN APP AWAY

Wherever you are, whatever you're looking for, search over 15,000 loose elements and 200,000 forward-integrated elements with Swarovski's inspirational new Crystal Collection App. Online or offline, stay app-to-date with the latest innovations and find popular classics – it's easy to install, easy to browse, easy to use.



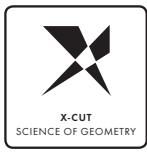
Made for iPad



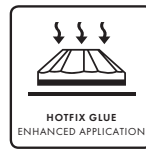
Made for Tablets

SWAROVSKI.COM/COLLECTIONAPP

EXCELLENCE, THROUGH INNOVATION AND ORIGIN



X-CUT
Advanced optical measurement and high-precision manufacturing deliver premium cuts characterized by unmatched brilliance.



HOTFIX GLUE
The variable temperatures at which Hotfix glue can be activated enable the application of crystals on a broad range of textiles.



PLATINUM PRO
With its new advanced foiling technique, Swarovski has set a new standard in the lifespan of crystals.



CRYSTALS - MADE IN AUSTRIA
The combination of innovation with sustainability and respect for individual wellbeing means that quality is always assured.

PREMIUM, BY SERVICE AND DESIGN



DESIGN SERVICE
Throughout its global network of Design Centers, Swarovski offers exceptional service provided by the industry's best creative talent.



GLOBAL SERVICE
Swarovski's Global Service Network provides customers with dedicated personal assistance on a local level.



APPLICATION SERVICE
A comprehensive range of application services means customers benefit from the extensive experience of leading international experts, as well as internal specialists.



DESIGNER EDITIONS
Creative collaborations with top designers result in exclusive cuts and unique designs for Swarovski crystal.

COMPLIANCE, WITH INTEGRITY



ADVANCED CRYSTAL
Swarovski's patented lead-free* formula has changed the DNA of crystal while still offering the same sparkle, dependability, and variety for which Swarovski is famous.



CLEAR
Regular legal monitoring of chemical requirements and reasonable testing provide customers with the comfort of trust in Swarovski's products.

*Crystal glass and all other materials containing 0.009% lead or less.



OEKO-TEX
Oeko-Tex® Standard 100 Class II (direct contact with skin) certification creates confidence in chemical safety of textile applications.



COMPLIANCE SERVICE
Assessments regarding substance limitations as well as compliance information and advice to support customers in complying with relevant laws, regulations, and voluntary standards.

[SWAROVSKI.COM/PROFESSIONAL](https://www.swarovski.com/professional)

GENERAL INFORMATION

Swarovski offers a comprehensive range of services, tailored to customers' requirements, for the application of Swarovski products.

APPLICATION MANUAL

This Application Manual offers extensive information on the various Application Services provided by Swarovski. Thanks to their outstanding quality, and with the help of specially developed application techniques, Swarovski products can be processed easily and quickly to produce a high-quality finished product. The processes involved are described in this manual on a step-by-step basis, with photos and illustrations.

Each application method contains detailed information on the following areas:

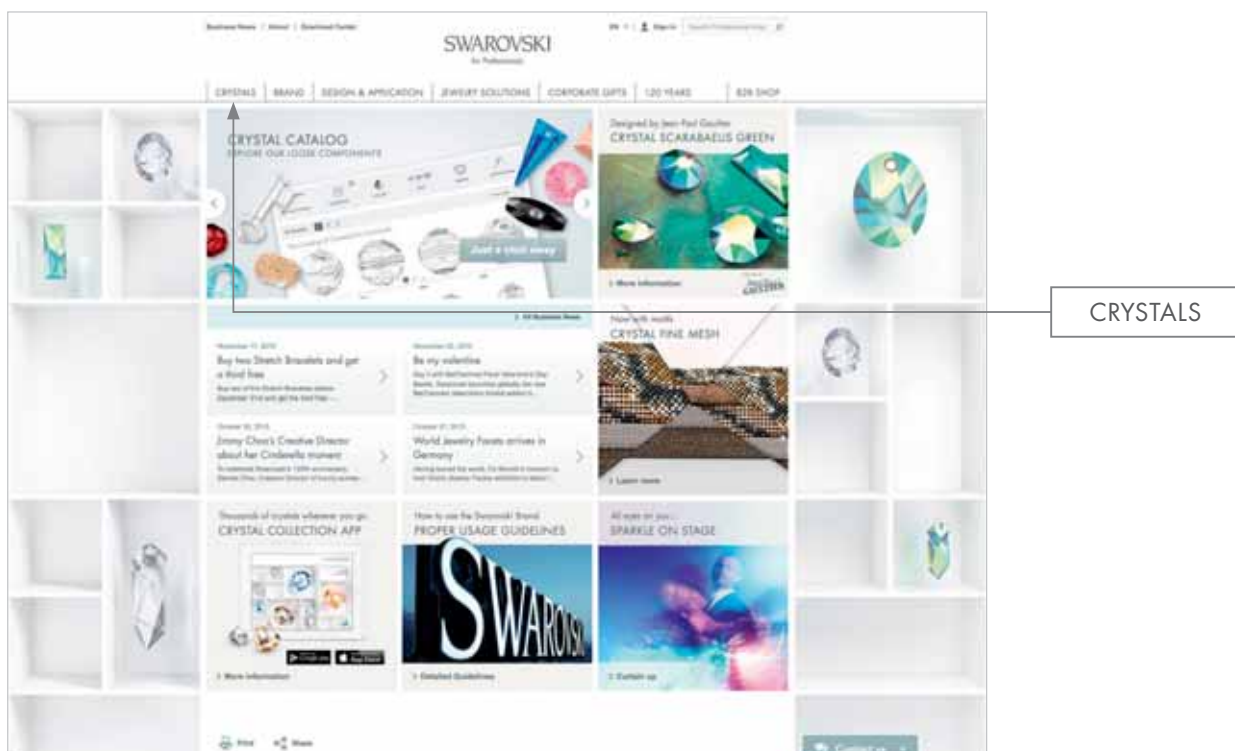
Product Overview	Swarovski products that are suitable for the application technique in question
Machines, Tools, and Aids	List of machines, tools, and aids necessary for application
Suppliers	Selection of suppliers that sell these machines, tools, and aids
Application	Detailed description of the entire application process and the product-specific procedure. Furthermore, the Hotfix Selector outlines extensive application parameters for suitable product and carrier material combinations
Useful Information	Advice and tips on working with Swarovski products
Quick Assistance	A checklist of typical application problems, along with possible causes and recommendations on avoiding them (in each chapter these are marked with a ?!)

Extensive care instructions and further information on laws, regulations, norms, and standards are featured at the end of the manual.

APPLICATION ONLINE: SWAROVSKI.COM/PROFESSIONAL

All the information contained in this manual is regularly updated on the Swarovski products business website (SWAROVSKI.COM/PROFESSIONAL). In addition, application techniques are demonstrated through animations and videos. The site is an excellent way to find out about Swarovski's application services and application techniques.

To gain access to the restricted section of the business website, please contact your local Swarovski representative.



APPLICATION SERVICES

Swarovski offers a comprehensive range of services, tailored to your requirements, for applying Swarovski products. In doing so, the company aims to meet the needs of each industry, and to jointly offer flexible and integrated solutions.

- Technical enquiry service
- Compliance service
- Technical customer support – field services
- Application partner network

Technical enquiry service

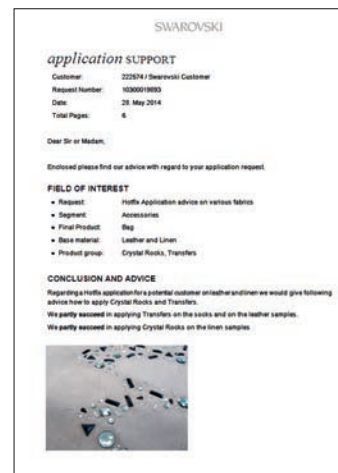
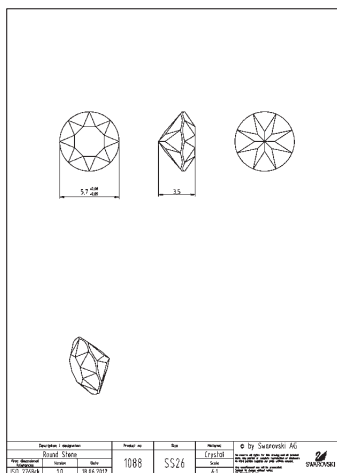
Available worldwide, the technical enquiry service can help you in the following areas:

- Product information
- Technical drawing
- Care instructions
- Information on industry standards
- Individual application tests based on customer samples
- Information on machines, tools, and aids

Compliance service

The worldwide available compliance service can support you in the following areas:

- Certificates
- Information on laws and regulations
- Compliance information of Swarovski crystals
- Compliance statement to customer-specific requirements



For further information, please contact your local Swarovski office.

Technical customer support – field services

Swarovski imparts its crystal application expertise through customized **Crystal Application Workshops, Crystal Application Consultancy, Troubleshooting, and Technical Assessments**. These can take place either on customers' premises or at Swarovski locations. The focus is always on customers' individual needs, the efficient use of Swarovski products, and on the quality of the crystal application.

Our services have been created to take advantage of our comprehensive crystal application expertise in the following areas: mastery of the relevant techniques, technical knowledge of Swarovski products, process-engineering competencies, and our experience of crystal application equipment, together with our product manufacturing knowledge of various industries.



Service results (dependent on the particular individual service package):

PREVENTION OF INCREASED DEVELOPMENT COSTS THROUGH TECHNICAL INPUT IN:

- The correct choice of Swarovski products
- The correct technical design
- The correct application technique
- The correct integration of an application process into the entire process landscape
- Application process set-up

PREVENTION OF COST COMPLAINTS THROUGH TECHNICAL INPUT IN:

- The correct positioning and arrangement of Swarovski products
- Learning how to check the quality of crystal applications
- Suitability of the customer's equipment, tools, and aids

PREVENTION OF INCREASED STAFF DEVELOPMENT COSTS THROUGH:

- Staff training in appropriate application techniques
- Building your technical knowledge base, thereby enabling you to be self-sufficient

Application partner network

As a company with a global sales network and deep understanding of the market, Swarovski has comprehensive knowledge of various application companies and their services from around the world.

Based on this knowledge, Swarovski has developed a global application partner network. These partners offer a wide range of technical and product-related services, as well as tailored production solutions. In order to qualify and to get access to the application partner network, certain criteria with regard to application techniques, know-how as well as product assortment need to be fulfilled by the application partners.

Application partners can assist you with a variety of application techniques, such as gluing, Hotfix application, sewing, embroidery, and mechanical application. In addition, many partners can carry out technically complex solutions, such as Flat Back Leather and the automated, mechanical application of Rivets. The services offered by our partners range from product and design consultancy, to prototyping and carrying out production, and make up a key component of our customer focus.

Should you require a professional partner to assist you in applying items such as Flat Backs onto interior, Transfer Motifs onto T-shirts, Rivets onto belts, or Plastic Trimmings onto jeans, the "Application Partner Platform" or your local Swarovski office can offer guidance.

Application Partner Platform (APP)

The Application Partner Platform enables you to find the right application partner swiftly and easily, wherever in the world production may be taking place. Through a tailored "search function", you can send out a specific, detailed request (e.g. searching for a specific country, an application technique, or products) to select partners around the world.

The platform is made up of two core areas – "Find a Partner" and "Become a Partner":

Find a Partner

Using the search function, this area enables you to locate the best application partner for your application work. You are immediately provided with a list of application partners, which you can download and save. If you use the search function for a specific enquiry regarding an application service, you receive detailed information from the application partners contacted.

Become a Partner

If you are interested in becoming an application partner yourself, the "Become a Partner" section contains key information on the requirements and an application form to complete. Your local Swarovski office will then contact you as soon as possible.

The screenshot shows the 'Find a Partner' search form on the Swarovski Professional website. The form is titled 'Find a Partner' and includes a search bar with the text 'Please fill out the search fields to find the right partner for your request.' Below the search bar, there are several input fields: 'Company', 'City', 'Continent' (with a dropdown menu showing 'please choose'), and 'Country' (with a dropdown menu showing 'please choose'). At the bottom, there are checkboxes for 'Products', including 'Flat Backs Hotfix', 'Flat Backs for Hotfix', 'Crystal Tattoos', and 'Crystal Trimmings'.

Access to the Application Partner Platform:

Part of the "Application Partner Platform" is located in the restricted area of the business website [SWAROVSKI.COM/PROFESSIONAL](https://www.swarovski.com/professional). Under "Design & Application" → "Application & Manufacturing" you will find access to the Application Partner Platform.

For access to the restricted area of the business website and for further information, please contact your local Swarovski office or register online on the business website.

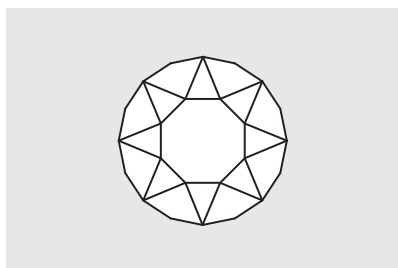
GENERAL PRODUCT INFORMATION

This list offers an overview of Swarovski products that are suitable for the application methods described. Product categories/ descriptions are based on the 2014 Collection.

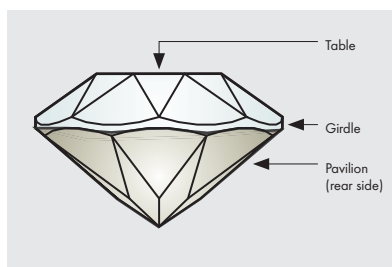
Round Stones	Round Stones are loose crystal elements. Most of them are pointed on the reverse side, making them easy to apply in either metal claw settings or pre-set cavities in die-cast metal alloys. The assortment features a wide variety of different cuts, the most innovative one is the XIRIUS Chaton.
Fancy Stones & Settings	Fancy Stones are offered in numerous shapes ranging from classical gemstone-inspired cuts to progressive trend cuts. They come in a huge assortment of different sizes and colors. Showing either a faceted or flat reverse side, Fancy Stones can be glued into pre-cast cavities or used in metal settings. Their precision-cut facets ensure the highest brilliance and endow design ideas with a unique sparkle.
Beads	Beads offer the highest standard available on the market. The high-quality precision cutting and the clear through-hole achieve high brilliance and clarity. Rounded hole edges reduce the wear on thread and increase the durability of designs. The assortment is divided into classic, romantic, and progressive shape characteristics. They are available in the latest fashion colors, effects, and cuts.
BeCharmed & Pavé	The BeCharmed assortment, from Beads, Crystal Pearls, Pavé, and Rondelles, to Stoppers and Pavé Balls in a brilliant array of colors and effects, offers unlimited combination possibilities. All products of this unique line feature a high-quality stainless steel part with Swarovski branding and a 4.5 mm-diameter hole, which is the standard size for existing charm concepts, making BeCharmed pieces ideal collectibles.
Crystal Pearls	Crystal Pearls are perfect replicas of genuine pearls. They are made of a unique crystal core covered with an innovative pearl coating, which features a flawless, silky smooth, rounded surface. They are available in a variety of shapes, sizes, and colors and are delivered loosely threaded or, if desired, also knotted.
Pendants	Pendants have timeless elegance and are available in a large range of classical and avant-garde cuts and shapes, as well as in many colors and effects. Pendants offer a whole range of design possibilities for different segments thanks to their easy application, with the hole on top requiring only a jump ring/ pinch bail with a chain or cord.
Flat Backs No Hotfix	Flat Backs No Hotfix are loose crystal elements backed with platinum foiling for extra brilliance and protection. These Flat Backs are easy to apply to a variety of carrier materials using standard one- or two-component glues. They are available in a multitude of sizes, colors, shapes, and cuts.
Flat Backs Hotfix	Flat Backs Hotfix are loose crystal elements with a flat reverse side that has been pre-coated with a heat-sensitive glue. These Flat Backs can be easily applied to a large range of textile carrier materials using heat to produce a durable and long-lasting crystal effect. Flat Backs Hotfix are available in a multitude of colors, shapes, and cuts.
Sew-on Articles	Sew-on Articles are loose crystals that can be easily sewn (either by hand, or with a standard domestic or industrial embroidery sewing machine) onto any type of textile or accessory. Sew-on Articles come in two- or three-hole varieties, including round, oval, and triangle holes for use in a wide range of decorative applications for fine embroidery or even jewelry. Lochrosen are crystals with just one hole. Sew-on Articles have rounded edges on the hole entry and exit areas to guarantee thread protection.
Self-adhesive Elements	Self-adhesive Elements such as Crystal-it, Crystal Fabric-it, Crystaltex-it Chaton or Crystal Rocks-it are eye-catching and innovative products that come ready-to-apply. They are pressure-sensitive and self-adhesive. When applied to paper and solid surfaces, they can create elegant, romantic, or sporty designs.
Transfers	Transfers are ideal for Hotfix application on all kinds of textiles. They are available in a large range of motifs and numbers of rows, which are made up of different articles from the Flat Back Hotfix assortment. Featuring designs from the in-house design team, they can comprise XIRIUS and XILION Roses, or Creation Stones, as well as Metallics and Cabochons.
Synthetics Hotfix	These versatile products open up a multitude of creative design possibilities through their numerous application techniques. They combine elegant crystals from Swarovski that can be applied using Hotfix technology with synthetic carrier materials. They are ideal for use in the textile, interior design, jewelry, and accessories segments.
Plastic Trimmings	Plastic Trimmings are plastic carrier materials with integrated crystals. These multi-functional products can either be hand- or machine-sewn or glued onto various surfaces. The range of bandings not only offers a color selection of chatons, but also a variety of casing colors.
Buttons, Fasteners & Zippers	Crystal Buttons can be used in exactly the same way as standard buttons. The assortment of available buttons ranges from those for shirts, blouses, jackets, and coats, to buttons for denim and accessories. They are suitable for hand and mechanical application. Zippers from our assortment are unique because the crystals are integrated into the zipper teeth, allowing them to be used in the same way as standard zippers.

Metal Trimmings	Metal Trimmings are forward-integrated metal products. They can be sewn by hand or machine and mechanically applied onto different fabrics or other materials. Metal Trimmings are bestsellers among the textile, shoe, and accessories segments because their wide range of application possibilities ensures that they can be used in a multitude of different ways.
Crystal Mesh	Crystal Mesh is a flexible metal mesh carrier with integrated loose crystals. The product is available in a wide range of colors and casings, either as a Hotfix version, which can be applied using heat, or as a No Hotfix version that can be hand- or machine-sewn.
Cupchains & Findings	These products are metal chains and findings that can integrate either Round or Fancy Stones and Beads into any creative design. They can be divided into seven sub-categories: Single Stone Settings, Cupchains and Brass Components, Multi Stone Settings, Channels, Metal Buttons, Rondelles, and Linked Findings. Each of these groupings is available in a wide variety of shapes, sizes, colors, and platings.

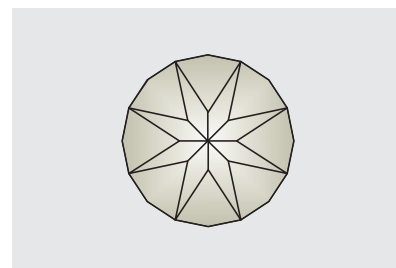
Crystal specifications



Front view



Side view



Rear view (Pavilion)

Foiling

Foiling is the process of mirror coating the reverse side of the crystals.



Silver Foiling (A)

A silver mirror finish for XIRIUS and XILION Hotfix articles only.



Platinum Pro Foiling (F)

A silver mirror finish that is coated with a platinum colored protective layer of highest quality. The Platinum Pro Foiling is not only resistant to environmental damage from chlorine, salt water, and perfume – it can also withstand processes such as soldering and electroplating, giving it unprecedented durability (e.g. art. 4120).



Aluminum Foiling (M)

An aluminum mirror finish is applied using a vacuum coating process (e.g. art. 2855 Flat Back HF).



Protective Layer (P) for Beads and Pendants

Protective layer is a transparent lacquer system that is applied over the effects. This lacquer is designed to protect the effects from scratches, fingerprints, and other damage and also helps to prevent moisture that can lead to corrosion (e.g. from perspiration) penetrating into the effect layer when jewelry is designed to incorporate Crystal Stones that are not set in casings/settings.



Unfoiled (U)

Effects

Vacuum Coating Effects

Vacuum coating processes on the surface of the crystal produce either a special surface or a translucent effect, according to the application methods used.

Please find below a list of all Swarovski effects followed by an explanation of the special vacuum coating processes.


Surface Effects

(Vacuum coating on the surface of the crystal)

	Effect Code	Name
	AB	Aurore Boreale
	ANTP	Antique Pink
	API	Astral Pink
	BLSH	Blue Shade
	BRSH	Bronze Shade
	CAL	Comet Argent Light
	COP	Copper
	DOR	Dorado
	GSHA	Golden Shadow
	HEM	Hematite (only on Jet)
	IRIG	Iridescent Green
	LISH	Lilac Shadow
	LTCH	Light Chrome
	LUMG	Luminous Green
	METSH	Metallic Sunshine
	METBL	Metallic Blue
	MLGLD	Metallic Light Gold
	MOL	Moonlight
	NUT	Nut (only on Jet)
	PARSH	Paradise Shine
	REDM	Red Magma
	ROGL	Rose Gold
	SAT	Satin
	SCGR	Scarabaeus Green designed by JPG
	SSHA	Silver Shade
	TRA	Transmission

Translucent Effects

(Vacuum coating on the reverse side of the crystal, effect shines through the transparent crystal)

	Effect Code	Name
	BBL	Bermuda Blue
	HEL	Heliotrope
	MBL	Meridian Blue
	SINI	Silver Night
	TAB	Tabac
	VL	Vitrail Light
	VM	Vitrail Medium
	VOL	Volcano

Patina Effects

(Partial coating of the correspondingly modified effects)

Effect Code	Name
BLAPA	Black Patina
GOLPA	Gold Patina
ROSPA	Rose Patina
SILPA	Silver Patina
WHIPA	White Patina

Lacquer^{PRO} Effects

A premium opaque varnish which is applied to the reverse side of the crystal instead of foiling, resulting in an opalescent appearance.

Effect Code	Name
L104	Powder Blue
L102	Powder Green
L105	Powder Grey
L103	Powder Rose
L101	Powder Yellow

Variations on Surface Effects

2x



Both sides of the stone are treated with an effect (e.g. art. 5000AB 2).

B



Effects on three sides of a cube shape (e.g. art. 5601 AB B).

V



The effect is used in reverse. A surface effect is used like a translucent effect (e.g. art. 2420 NoHF SSHA V - Silver Shade on the reverse side).

Z



Only a part of the stone is treated with an effect (e.g. art. 4869 HEL Z).

FC (Full Coated)

Improved technology allows for the perfectly homogeneous, all-round application of high-intensity metallic effects in the Bead assortment (art. 5000).

CAL'V'SI & CAL'VZ'SI

The effect CAL (Comet Argent Light) is also used as a mirror coating on the reverse side of the crystal instead of standard foilings (A, F, ...) in special cases (e.g. art. 2035).

/G

Article with partly (PF) or fully frosted (FF) surface (e.g. art. 2611/G)

PA (Patina)

Innovative technology allows for the partly coated application of adapted effects. Its historical edge and "used" look give it a certain timelessness, without losing its crystalline appearance (e.g. art. 2034).

Special Surface Effects

Swarovski has been able to achieve various special surface effects by using special chemical and mechanical processes on the surface of the crystals.



MAT



COS

<i>Effect Code</i>	<i>Name</i>
MAT	Matt Finish
COS	Cosmojet

The Matt Finish effect is achieved by performing a chemical matting process on the entire surface of the crystal. Small variations in the size of the articles may occur as a result of this chemical process.

Using a special process, the outer facets of Flat Back Roses can be blackened. The Cosmojet effect is only possible for the color Crystal (001).

Colors



Effects



Classic Colors: This color range offers a wide choice of traditional Swarovski crystal colors.

Exclusive Colors: This color range is offered exclusively by Swarovski.

The listed colors and effects are based on the Color Chart for Round Stones (2016).

The standard assortment of colors and effects may vary per product group. Slight changes in shades are unavoidable. Colors may vary according to cut and shape.

The plating resistance of effects is tested according to Swarovski's plating guidelines (SWAROVSKI.COM/PROFESSIONAL). Customers are advised to carry out their own tests if customers' plating parameters diverge from Swarovski plating guidelines. Details for parameter settings can be found on page 19.

* Crystals are not resistant to plating and similar processing.

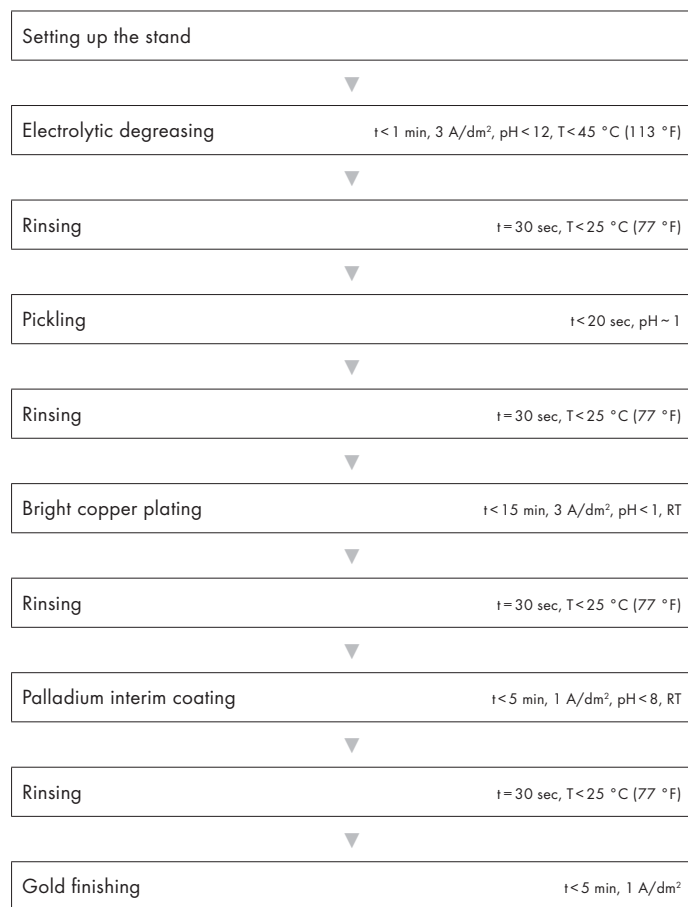
** Crystals are resistant to plating only if they are foiled.

*** The color Indian Siam is available only for a specific size range. Please refer to the current Collection.

**** Designed by Jean Paul Gaultier

Testing the plating-resistance

For testing the plating-resistance of effects, the following parameter settings have to be considered:



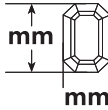
Note: Swarovski cannot warrant the resistance of effects when the parameters as set out above are changed. Swarovski's declaration of resistance does not discharge customer from carrying out its own tests of the suitability for the intended finishing of products. The use and processing of these techniques and products are solely the user's responsibility.

Sizes

Various measurement abbreviations are used to classify the jewelry stones.



PP, SS
 Pearl Plate (PP), Sieve Size or Stone Size (SS)
 for round crystals.



mm
 Metric figures in millimeters for crystal components and
 geometric forms.

•	PP 0 0.70-0.80 mm	•	PP 21 (SS 10) 2.70-2.80 mm	•	SS 26 5.61-5.78 mm	•	SS 45 9.85-10.19 mm
•	PP 1 (SS 000) 0.80-0.90 mm	•	PP 22 (SS 10) 2.80-2.90 mm	•	SS 27 5.78-5.96 mm	•	
•	PP 2 (SS 00) 0.90-1.00 mm	•	PP 23 (SS 11) 2.90-3.00 mm	•	SS 28 5.96-6.14 mm	•	SS 46 10.19-10.54 mm
•	PP 3 (SS 0) 1.00-1.10 mm	•	PP 24 (SS 12) 3.00-3.20 mm	•	SS 29 6.14-6.32 mm	•	
•	PP 4 (SS 1) 1.10-1.20 mm	•	PP 25 (SS 13) 3.20-3.30 mm	•	SS 30 6.32-6.50 mm	•	SS 47 10.54-10.91 mm
•	PP 5 (SS 2) 1.20-1.30 mm	•	PP 26 (SS 13) 3.30-3.40 mm	•	SS 31 6.50-6.68 mm	•	
•	PP 6 (SS 2) 1.30-1.35 mm	•	PP 27 (SS 14) 3.40-3.50 mm	•	SS 32 6.68-6.87 mm	•	SS 48 10.91-11.30 mm
•	PP 7 (SS 3) 1.35-1.40 mm	•	PP 28 (SS 14) 3.50-3.60 mm	•	SS 33 6.87-7.07 mm	•	
•	PP 8 (SS 3) 1.40-1.50 mm	•	PP 29 (SS 15) 3.60-3.70 mm	•	SS 34 7.07-7.27 mm	•	SS 49 11.30-11.72 mm
•	PP 9 (SS 4) 1.50-1.60 mm	•	PP 30 (SS 15) 3.70-3.80 mm	•	SS 35 7.27-7.48 mm	•	
•	PP 10 (SS 4) 1.60-1.70 mm	•	PP 31 (SS 16) 3.80-4.00 mm	•	SS 36 7.48-7.70 mm	•	SS 50 11.72-11.97 mm
•	PP 11 (SS 5) 1.70-1.80 mm	•	PP 32 (SS 17) 4.00-4.10 mm	•	SS 37 7.70-7.93 mm	•	
•	PP 12 (SS 5) 1.80-1.90 mm	•	PP 33 (SS 17) 4.10-4.20 mm	•	SS 38 7.93-8.16 mm	•	SS 55 12.97-13.22 mm
•	PP 13 (SS 6) 1.90-2.00 mm	•	SS 18 4.20-4.40 mm	•	SS 39 8.16-8.41 mm	•	
•	PP 14 (SS 6) 2.00-2.10 mm	•	SS 19 4.40-4.60 mm	•	SS 40 8.41-8.67 mm	•	SS 60 14.22-14.47 mm
•	PP 15 (SS 7) 2.10-2.20 mm	•	SS 20 4.60-4.80 mm	•	SS 41 8.67-8.95 mm	•	
•	PP 16 (SS 7) 2.20-2.30 mm	•	SS 21 4.80-4.90 mm	•	SS 42 8.95-9.23 mm	•	SS 65 15.47-15.72 mm
•	PP 17 (SS 8) 2.30-2.40 mm	•	SS 22 4.90-5.10 mm	•	SS 43 9.23-9.53 mm	•	
•	PP 18 (SS 8) 2.40-2.50 mm	•	SS 23 5.10-5.27 mm	•	SS 44 9.53-9.85 mm	•	SS 70 16.72-16.97 mm
•	PP 19 (SS 9) 2.50-2.60 mm	•	SS 24 5.27-5.44 mm	•		•	
•	PP 20 (SS 9) 2.60-2.70 mm	•	SS 25 5.44-5.61 mm	•		•	SS 75 17.97-18.22 mm

SWAROVSKI PRODUCTS AND SUITABLE APPLICATION TECHNIQUES

		Soldering	Plating	Setting	Gluing	Hoflix Application	Sewing	Embroidery	Hand Application	Mechanical Application	Ceralun
Round Stones				✓	✓						✓
Fancy Stones & Settings	Fancy Stones			✓	✓						✓
	Settings	✓	✓	✓			✓ ¹		✓		
Beads							✓ ¹		✓		
BeCharmed & Pavé							✓ ¹		✓		
Crystal Pearls							✓ ¹		✓		
Pendants							✓ ¹		✓		
Flat Backs No Hoflix				✓	✓						✓
Flat Backs Hoflix	XILION Rose & XIRIUS Rose					✓					
	Framed Flat Backs					✓					
	Creation Stones					✓					
	Creation Stones Plus					✓					
	Cabochon Round					✓					
Sew-on Articles							✓	✓ ²	✓		
Self-adhesive Elements					✓						
Transfers	XILION Transfers & XIRIUS Transfers					✓					
	Creation Transfers					✓					
	Creation Transfers Plus					✓					
	Pearl Transfers					✓					
	Diamond Transfers					✓					
	Metallic Transfers					✓					
	Mezzo Transfers					✓					
Synthetics Hoflix	Crystal Fabric				✓	✓					
	Crystal Rocks & Crystal Fine Rocks				✓	✓					
	Crystaltex				✓	✓	✓ ³				
Plastic Trimmings	Basic Bandings				✓		✓	✓ ⁴			
	Fishnet Bandings						✓				
	Decorative Bandings						✓				
	Plastic Components						✓ ¹		✓		
Buttons, Fasteners & Zippers	Crystal Buttons						✓		✓		
	Buttons with Plastic Shank						✓		✓		
	Snap Fasteners & Decorative Buttons									✓	
	Inset Snap Fasteners & XIRIUS Flat Back Snap Fasteners									✓	
	Jeans Buttons									✓	
	Buttons with Metal Shank						✓		✓		
	Zippers						✓				
Metal Trimmings	Chaton & Flat Back Bandings / Motifs				✓		✓				
	Spike Bandings				✓		✓ ¹				
	Rivets (Crystal Pearl, Square, Chessboard, Star, Spike)									✓	
	Roses & Chaton Montées						✓ ¹		✓		
	Rose Pins, Chessboard Pins & Rhombus Pins									✓	
	Crystal Studs									✓	
Crystal Mesh					✓	✓	✓ ⁵				
Cupchains & Findings		✓	✓				✓		✓		

1 These products are not suitable for sewing with a sewing machine 2 Art. 3129 3 Not suitable for Crystaltex Chaton Bandings 4 Art. 50 002, 50 003, and 50 004 (single-row)
5 Crystal Fine Mesh is not suitable for sewing with a sewing machine

SOLDERING, PLATING, AND STONE SETTING

Swarovski offers an ideal product selection for soldering, allowing for simple and problem-free production of state-of-the-art jewelry pieces and accessories. Further techniques such as plating and stone setting complement the comprehensive and diverse application options offered by Swarovski.

PRODUCT OVERVIEW

The following products are suitable for soldering, plating, and stone setting:

	SOLDERING	PLATING	STONE SETTING
Round Stones			✓
Fancy Stones			✓
Settings	✓*	✓*	✓
Flat Backs No Hotfix			✓
Cupchains & Findings	✓*	✓*	

* It is recommended to use the unplated versions (Z).

MACHINES, TOOLS, AND AIDS

The following machines, tools, and aids can be used for soldering Swarovski crystals:



Micro soldering kit



Propane gas burner



Blow torch



Solder wire

It is recommended that solder wire with a flux core is used, which guarantees an even flow of solder.



Solder paste

Solder paste containing flux must be applied at exactly the right spot to create a clean solder joint.



Solder pellets

Solder pellets should be placed in an acid flux before being used. This ensures that the solder will flow correctly.



Soldering molds

J-board, express cement



Polishing machine



Gloves



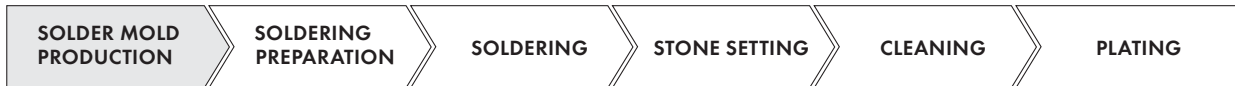
Protective eyewear

SUPPLIERS

This list provides an overview of selected suppliers worldwide.

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
Micro soldering kit	Horbach	www.horbach-giesstechnik.de
	Rio Grande	www.riogrande.com
Propane gas burner	Horbach	www.horbach-giesstechnik.de
	Rio Grande	www.riogrande.com
Blow torch	Rio Grande	www.riogrande.com
	Siegfried Remschnig	www.remschnig.at
	SRA Soldering Products	www.sra-solder.com
Solder wire	Alpha	www.alpha.alent.com
	Ögussa	www.oegussa.at
	Rio Grande	www.riogrande.com
	SRA Soldering Products	www.sra-solder.com
Soldering paste	Alpha	www.alpha.alent.com
	Ögussa	www.oegussa.at
	Rio Grande	www.riogrande.com
	SRA Soldering Products	www.sra-solder.com
Solder pellets	Ögussa	www.oegussa.at
	Rio Grande	www.riogrande.com
	SRA Soldering Products	www.sra-solder.com
Flux	Alpha	www.alpha.alent.com
	Ögussa	www.oegussa.at
	Rio Grande	www.riogrande.com
	SRA Soldering Products	www.sra-solder.com
J-board (solder mold)	SRA Soldering Products	www.sra-solder.com
Express cement (solder mold)	3M	www.3m.com
Settings	Swarovski	www.swarovski.com/professional
	E.H. Ashley & Company, Inc.	www.ehashley.com
	Franz Simm Metall- und Zinkdruckgusswaren GmbH	www.simm-metallwaren.de
	Josef Bergrs GmbH & Co. KG	www.josef-bergrs.de
	Rio Grande	www.riogrande.com

APPLICATION



A solder mold is required to reproduce jewelry pieces. First the original model of the jewelry piece is soldered. This is then used to make an impression in a suitable impression material (J-board, express cement). Depending on the size of the jewelry piece and mold medium, this impression can be made several times.



1 Solder the original model.



2 Strengthen the rear of the original model with wire.



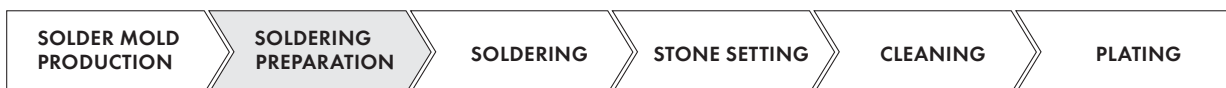
3 Press the original model into a suitable impression material.



4 Once the material hardens, the original model can be removed.

Note: The solder mold must be designed in such a way that hardly any pressure is needed to position the Cupchain segment into the mold. The crystals may be damaged if there are high levels of mechanical stress on the cups, or if they are deformed.

?!
!



Materials and aids should be clean, and particularly **free of any grease**, to ensure proper application. When soldering and plating, adequate ventilation is essential. In addition, it is recommended that protective clothing, protective eyewear and protective gloves are worn in line with the manufacturer's safety information sheets. Wearing protective gloves also prevents aids from getting dirty. **?!**

Selecting the optimum solder and flux

When selecting solder, the working temperatures and flow characteristics are particularly important. Solder is available from various manufacturers in wire form, with or without a flux core, as a paste and as pellets. **?!**

Only soldering alloys with a working temperature up to 280 °C (536 °F) should be used for soldering Cupchains. The higher the working temperature of the solder material used, the more precise workmanship and exact temperature control are necessary to avoid damaging the crystal and the foiling. **?!**

When soldering Cupchains, solder wire with a flux core is more suitable. If solder pellets are being processed, or the wire used does not have a flux core, the flux should be adapted according to the solder manufacturer's instructions, while any corrosive effects on the foiling should be checked via pre-testing. These effects should be assessed after plating, as damage done during soldering is often only visible at this point.

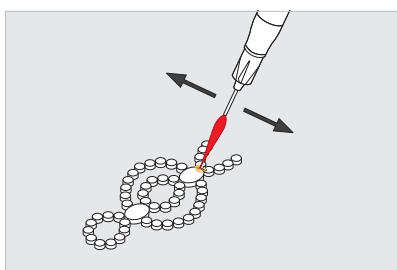
For soldering Cupchains we suggest using one of the following lead-free solder wires:

NAME	COMPOSITION	MELTING RANGE	SUPPLIER
Envirosafe	96.5% Sn, 3.45% Cu, 1% Sb, 0.05% Ag	215 - 220 °C 419 - 428 °F	www.sra-solder.com
Silox 227	99% Sn, 1% Cu	227 °C 440 °F	www.oegussa.at



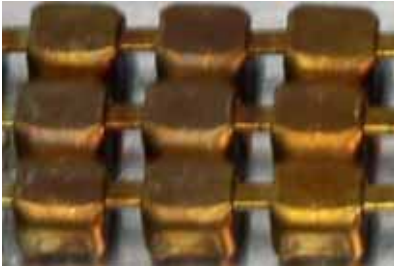
Soldering time and temperature

The right flame size and the time it is applied are important criteria when manufacturing soldered Cupchain pieces. The size of the flame must comply with the instructions for use provided by the tool's supplier. Only heat the part of the jewelry piece in which the solder should flow. If the flame is held too long on the jewelry piece, the piece and the crystals may become overheated and therefore damaged or destroyed. **?!**

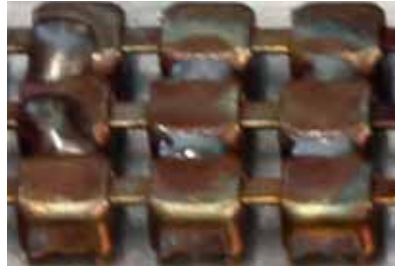


Note: A sudden drop in temperature after the soldering process should be avoided (e.g. shock cooling), as this could damage the crystal (e.g. chipping). **?!**

Color during soldering



1 Too low temperature

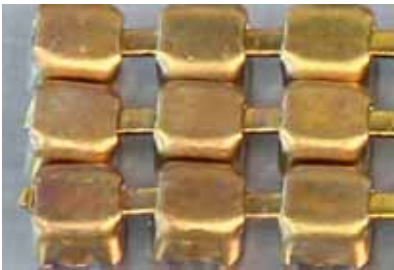


2 Optimum temperature



3 Too high temperature

Color after soldering



1 Too low temperature



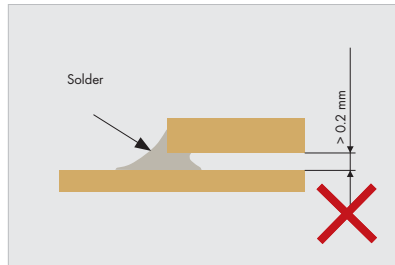
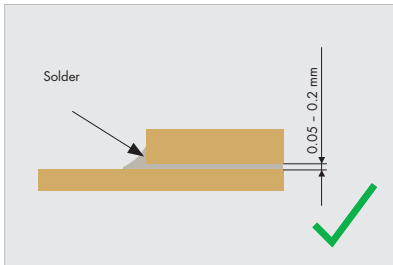
2 Optimum temperature



3 Too high temperature

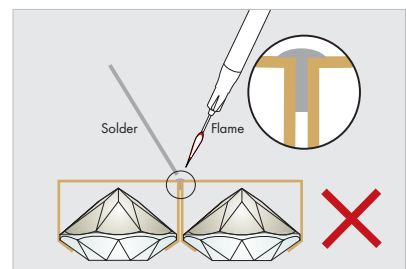
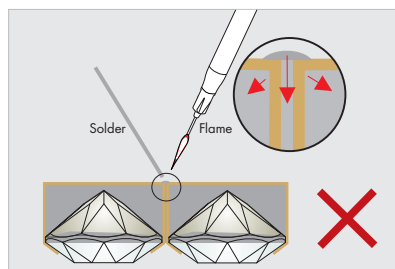
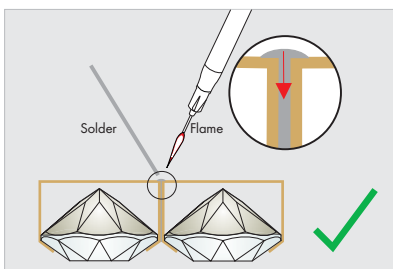
Optimum soldering joint

The width of the joint to be soldered should be between 0.05 mm and 0.2 mm. If the joint is wider than 0.2 mm, the solder will not fill the joint sufficiently. A joint that is too narrow will also not contain enough solder to make it strong and neat.



Optimum solder quantity

The right amount of solder ensures strong and clean soldered joints, which can then be cleanly plated. Correctly applied solder flows into the joints of the jewelry piece and provides a strong connection. Either too much or too little solder can damage the creations or result in unwanted discoloring of the crystal.





Exact amount of solder

The solder is drawn into the solder gap via capillary action.



Too much solder

Too much solder results in the cup backfilling, with the hot solder damaging the foiling. This damage creates a corroding surface following plating, and the foiling is destroyed. As such, these types of soldering errors are only really visible after plating.



Too little solder

Too little solder means the soldering gap is not completely filled, and the joint is weakened.

Soldering



1 Cut the Cupchain to the required length.



2 Put the Cupchain in the solder mold.



3 Solder the required spots.



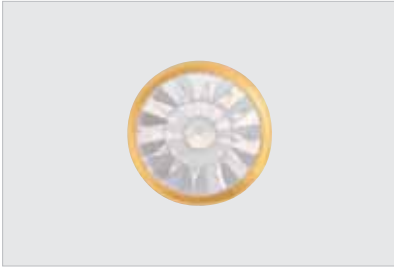
4 Remove the soldered Cupchain from the mold.



Alongside the application methods outlined in this manual, Swarovski products can also be employed using metal settings. Crystals can be set manually (using pliers, metal spatulas, or punching tools) or by machine.

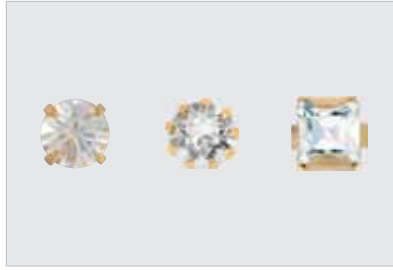
According to how the crystals are integrated into the metal settings, there are various types of settings, both plated and unplated. Whenever possible, the crystals should be set before plating the settings. The Swarovski assortment features products like Cupchains that have already been set, as well as Settings for Fancy Stones. Crystals can be set after plating as well, depending on the shape and geometry of the jewelry. Please be aware that a selected range of Swarovski crystals cannot be plated. For further information on this, please see the current Swarovski Crystal Collection.

Setting types



Bezel settings

With bezel settings, the crystals are bezelled in to remain in the cup.



Prong settings

With prong settings, Swarovski crystals are held in position by claws. In most cases there are four prongs. Settings with flaps have significantly broader claws. The advantage here is that the broader claws are much less likely to damage very sensitive carrier material.

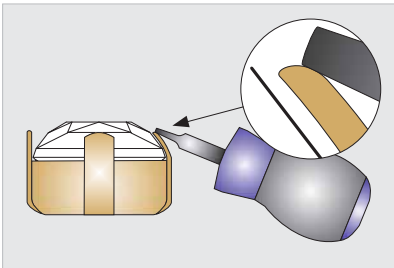


Settings for gluing

In this type of setting (crystal) elements are glued in.

Setting by hand

1. Depending on the shape and size, the cup is held using tweezers, flat nose pliers, or flat head pliers, without deforming it.
2. Place the crystal in the setting using a pair of tweezers or vacuum tweezers.
- 3a. Bezel setting: Press the cup shut using a setting closer. Setting closers are available from jewelry suppliers.
- 3b. Prong setting: The prongs of round cups can be pressed in place using a suitable setting closer. For all other forms, the prongs are individually closed in opposite positions, using a suitable pressing tool.



Note: After setting, the crystal should still be slightly movable in the setting. The setting must be constructed so that the crystal can be positioned into it without damaging the foiling. When settings are too tight or prongs are bent, the foiling or the protective lacquering can be damaged, possibly resulting in corrosion. If the setting is closed too strongly, the crystal can be damaged.



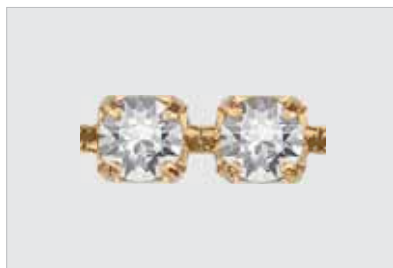
Application methods for set crystals

The following application possibilities are available for already set crystals:



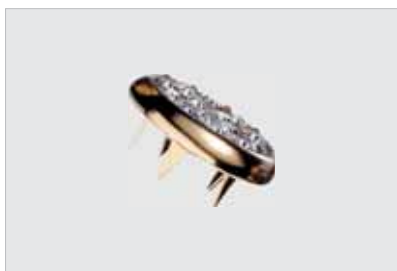
Sewing

Sew-on cups are applied by sewing onto textiles and leather. There are holes in the cups for the thread to pass through.



Soldering

These types of settings are suitable for soldering with other cups and/or with Cupchains. They are mostly used in the jewelry segment.



Mechanical application

With this special type of setting, the set crystal is applied onto the textile using claws. For more information please consult the corresponding chapter.



Threading

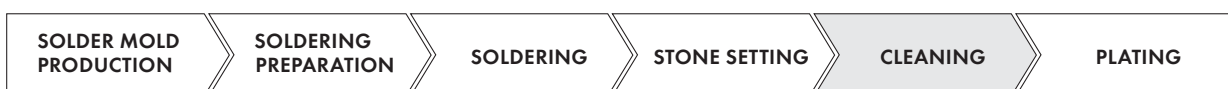
Settings that can be used as a pendant have an eyelet at the top, to which a chain can be attached. Settings with two eyelets can be attached to other elements.

Working with end connectors (brass components)

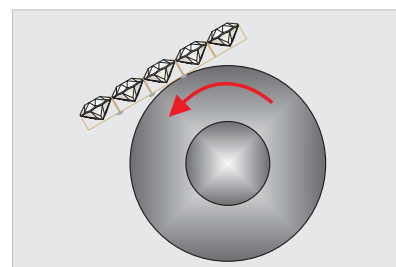
Plated Cupchains and Findings can easily be combined with end connectors (brass components) in order to create striking pieces of jewelry.



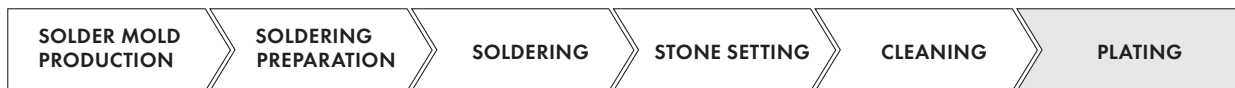
The end connectors can be attached to the end of the Cupchain with flat-nosed pliers and interconnected by either jump rings or lobster claws.



To avoid corrosion, soldered items should be cleaned as soon as possible after the soldering process. This will make the plating process significantly easier. Care must be taken when using mechanical polishing devices. Polishing media that are too hard or drums that rotate too quickly can damage the items and the crystals. Check the quantity, the polishing agents and time, the rotating speed, and the height of the fall, in order to keep mechanical stress levels as low as possible. In order to preserve the high quality of the creations, we recommend not using organic solvents and not exceeding a maximum temperature of 100 °C (212 °F).



Removal of excessive solder alloy by polishing

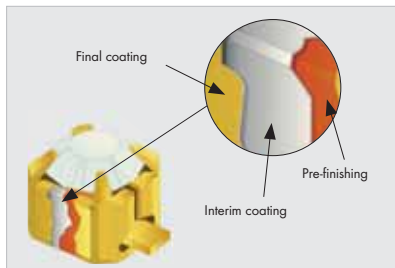


Plating serves to finish the jewelry piece. During this process, metallic coatings are electrolytically added to the surface of the material. The process can only be carried out if the material to be plated is conductive. During the design process, please ensure that individual colors and coating effects can withstand plating. For further information, please see the color overview in the current Swarovski Crystal Collection.

The most important criteria for an excellent finishing process are:

- Selecting reliable electrolyte suppliers who offer good service and who can provide detailed operating instructions
- Selecting suitable high performance electrolytes
- Careful maintenance of the unit and the electrolytes
- Using the recommended settings for plating Cupchains

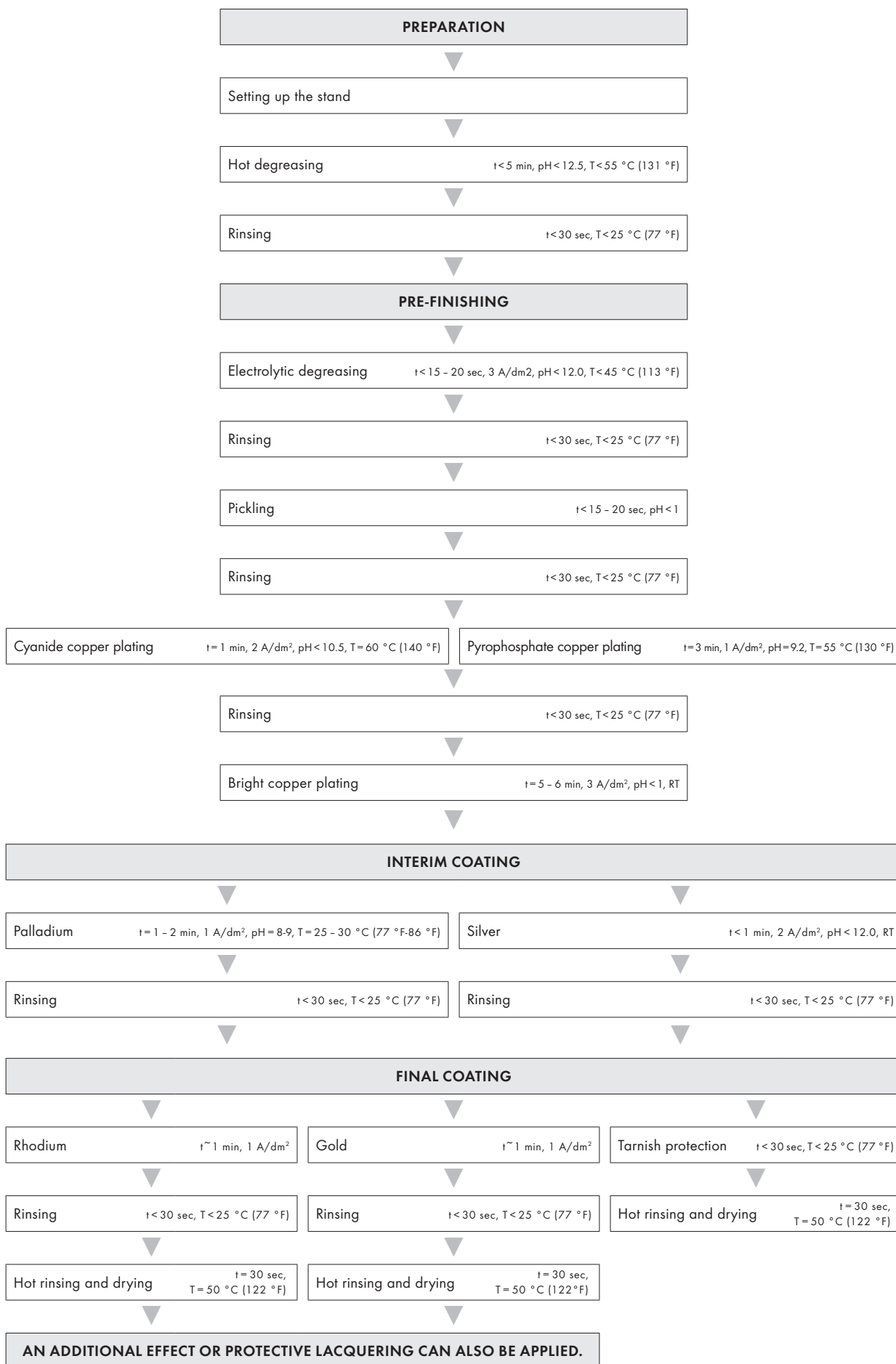
Note: Strong alkaline solutions, long exposure times in alkaline baths, the incorrect use of ultrasound, and high current densities usually lead to chemical and/or mechanical damage to crystals.



Short descriptions of the processing steps

- **Hot degreasing:** Here, most of the surface pollution (e.g. dirt, grease, soldering flux) is removed.
- **Electrolytic degreasing:** Only cathodic degreasing, suitable for brass and non-ferrous metals, is recommended for fine cleaning Cupchain jewelry.
- **Pickling:** This part of the process serves to remove oxidization from the metal and also the remains of any scale left from the soldering process.
- **Cyanide copper plating:** This processing step serves to improve adhesive strength and conductivity.
- **Pyrophosphate copper plating:** Like cyanide copper plating, this process improves adhesive strength and conductivity. The advantage is that the process does not involve cyanide, though the disadvantage is that higher current densities and longer exposure times are required.
- **Bright copper plating:** The use of sulfuric bright copper plating is recommended because of its excellent ability to cover surface flaws and create an even finish.
- **Palladium coating:** Palladium is presently the only recommended replacement for nickel since the bronze electrolytes currently available on the market can, through their extreme alkalinity, lead to damage of the foiling.
- **Silver coating:** Shiny silver coatings are usually separated from cyanide solutions that contain alkali silver (I)-cyanide, alkali cyanide, alkali carbonate, and organic and/or inorganic additives.
- **Gold coating:** It is recommended to use phosphorus or citric acid electrolytes (pH ~ 3 - 4), which contain potassium gold (I)-cyanide.
- **Rhodium coating:** Sulfur or phosphoric acid based electrolytes are used for rhodium plating, from which shining, nearly silver-white layers can be applied.
- **Tarnish protection**
 - Temporary protection against tarnishing: These are based either on wax mixtures in organic solvents or long-chained sulfuric organic compounds, which can be used as wet-on-wet aqueous emulsions.
 - Permanent tarnishing protection systems: Cathoretic lacquering systems have been proven especially effective as a longer lasting protective system for Cupchain jewelry. They have the advantage over conventional dipping and spray lacquers based on acrylic or zapon varnish (cellulose lacquer) in that only the conductive surfaces are very evenly coated while the isolated facets of the crystals remain uncoated.

Parameter settings for plating Cupchains



DIRECTIONS FOR JEWELRY MANUFACTURING

This section offers a brief overview of the ways in which Swarovski products can be integrated into jewelry design software, and a summary of the two most important production techniques for jewelry: rubber mold and lost wax.

Jewelry design software

Leading software manufacturers offer special programs with three-dimensional display possibilities for the design of jewelry and accessories. These 3D-design programs feature a whole range of functions that simplify and support the design process and therefore also the entire production process.

Special software solutions that have integrated a range of digitally processed Swarovski crystals in their programs are already available (www.3design.com). These can be simply and quickly integrated into any design, thus allowing the designer to work with Swarovski crystals right from the beginning of the design phase.

Production process

RUBBER MOLD PROCESSES

This process is widely used in the production of fashion jewelry. Tin alloys are mostly used here, and the biggest advantage of this procedure is the favorable price of the required tools.



1 Several original models are shaped out of metal, which must already exhibit an excellent surface quality. The expected shrinkage during casting must be taken into account.



2 These original models are pressed into a rubber mold. The rubber mold gets vulcanized to create a rubber casting model.



3 Channels are cut in the rubber plate for the casting process.



4 The completed rubber molds are pressed together and filled with the molten metal alloy during rotating (centrifugal casting procedure).



5 After cooling and removing from the mold, the casting channels are cut off.



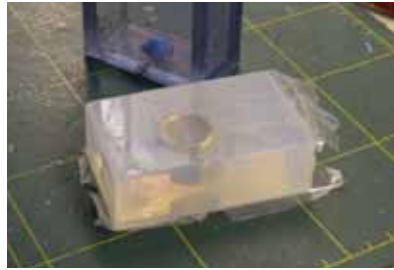
6 The cast model achieved by this process is ground and polished in preparation for the plating process.

LOST WAX PROCESS

The lost wax process is used for metals with a higher melting point, for example brass, silver, and gold.



1 Production of a prototype, e.g. through rapid prototyping; the better the surface quality is here, the better the casing will be later. The expected shrinkage during casting must be taken into account.



2 The prototype is either formed with silicone or vulcanized between raw rubber plates.



3 The already produced mold is injected with molten wax by a wax injector to create a wax model.



4 The wax forms created this way are each melted onto a wax tree format with a wax welding device. The trunk of the wax tree later serves as the casting channel.



5 The tree is now placed into a cuvette, the holes are glued up and it is embedded in implantation paste under vacuum and vibration.



6 The wax is melted out after the implantation paste has hardened. Remaining wax is burnt out in a kiln. The wax must be completely burnt out, leaving only the clean cavities.



7 While it is still hot, the cuvette is filled, under vacuum, with the molten metal. Because of the porosity of the form, the molten metal fills every part of it.



8 After casting, the hot cuvette is plunged into cold water. The casting tree is then cleaned.



9 After the jewelry pieces are removed from the casting tree, they are finished by grinding and polishing and pre-treated for the galvanization process.

QUICK ASSISTANCE

The following table outlines common problems and their causes when soldering, plating, and stone-setting Swarovski products, 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
Metal components:	
The solder joints crack.	1, 2, 3, 4
The jewelry piece has restricted movement.	2, 5
The metal surface is defective.	2, 6
The metal surface is uneven.	7
Defective finishing on the soldered areas.	8
Corrosion occurs on the metal.	9
Crystal	
The crystal chips off.	10, 11, 12, 13
The crystal becomes discolored.	14, 15, 16, 17

CAUSE	RECOMMENDATION
1 Too little solder is used. This weakens the solder joint, as the soldering gap is not completely filled.	Use more solder.
2 Too much solder is used. A large solder joint can result in cracks, because any force applied to the piece directly affects the solder.	Use less solder, especially in the areas close to the moving parts. Too much solder at these parts restrict their flexibility.
3 The flow of the solder is insufficient.	The following factors contribute to a sufficient flow of solder: <ul style="list-style-type: none"> ▪ The flame needs to be strong enough so that both solder and cup can heat up to the required working temperature. ▪ To make sure the flux cannot vaporize, the soldering temperature must not exceed 280 °C (536 °F). A vaporized flux means that the solder is not able to cover the metal surface. ▪ The melting temperature of the solder must not be higher than 280 °C (536 °F).
4 The metal surface, solder, flux, or solder mold is dirty.	Special attention must be paid to use clean (and above all grease-free) metal surfaces.
5 Exposure to the finishing process has been too long.	The exposure time for functional and flexible elements should be kept as short as possible. Optimizing the polishing processes and the use of high quality electrolytes is also recommended.
6 Insufficient cleaning after soldering.	Incorrect cleaning has a negative impact on the finishing process. Carefully check the cleaning process.
7 Poor quality of polishing. The metal surface shows irregularities like burns or an orange color.	Carefully polish the product and take care that the processor plating baths are set up correctly.
8 Unsightly finishing on the solder areas can have several causes: <ul style="list-style-type: none"> ▪ incorrect soldering ▪ insufficient cleaning after the soldering process ▪ the use of sulfuric acid in the pickling process (if lead-containing solder has been used) ▪ the absence of or incorrect use of copper plating 	Carefully follow the soldering steps described in this chapter.
9 Insufficient rinsing or using contaminated rinsing water can cause tarnishing or corrosion.	The transfer times between the individual stages of the process should be kept as short as possible. Rapid tarnishing of silver can be prevented by using effective tarnishing protective systems (e.g. coatings, wax, lacquer etc.).
10 Poor quality of solder mold.	The solder mold must be designed in such a way that hardly any pressure is needed to position the Cupchain segment into the mold. The crystals may be damaged if there are high levels of mechanical stress on the cups, or if the cups are deformed.

CAUSE	RECOMMENDATION
11 Thermal shock during the soldering or cooling process can cause tension in the crystals.	Avoid extreme differences in temperature during and after the soldering and cooling process.
12 When using polishing drums, the surface of the crystals can be damaged through hard polishing components in the rotating machine.	Mechanical stress levels should be kept as low as possible. Check the quantity of articles used, the polishing agents and time, as well as the rotating speed and the height of the fall.
13 Using barrel plating can damage crystals in heavy or sharp Cupchains due to the Cupchains' size or shape.	In general it is recommended that Cupchain jewelry should be finished on a plating rack. If using a barrel plating, choose the best type of drum and optimize the rotation and the fall height. When the drum is between the different stages of the finishing process and contains no liquid, the items being plated inside the drum may damage each other.
14 The soldering temperature is too high.	If the soldering flame is too strong or the soldering times are too long, there is the danger to overheat the solder joints. This can damage the crystals. It can be helpful using a solder that melts at a lower temperature. For more details see the temperature information on page 27 - 28.
15 Too much solder is in the cups. This can damage the crystals' foiling and subsequently leads to discoloring.	To make sure the right amount of solder is used, remove one crystal from the cup. If there is any solder left in the cup, reduce the amount of solder. This can be achieved by using a solder wire with a maximum diameter of 1 mm or by reducing the time the solder is in contact with the cups.
16 Incorrect cleaning with ultrasonic can damage the foiling of the crystals.	Take care not to use the ultrasonic too intensively or for too long time.
17 Faults occurred during the finishing process.	Check the alkalinity, current density, exposure times, and temperatures of the plating baths used. Further mistakes could be incorrect rinsing and post processing techniques.

CARE INSTRUCTIONS

To ensure the highest quality and longest-lasting applications of Swarovski products, proper care is essential. The Swarovski Hotfix adhesive is characterized by its wash resistance and easy-care properties.

TEXTILE CARE INSTRUCTIONS

								
General Recommendations		Turn inside out, choose a gentle wash cycle and use mild laundry detergent. To protect the crystals as much as possible, the use of a soft wash bag is recommended.			Turn inside out and use mild laundry detergent.	Do not wash!	Chlorine bleach may be used.	Do not use chlorine bleach!
Round Stones		✓						✓
Fancy Stones		✓						✓
Beads	Beads	✓						✓
	Crystal Mesh Balls				✓			✓
BeCharmed & Pavé			✓					✓
Crystal Pearls					✓			✓
Pendants						✓		✓
Flat Backs No Hotfix ¹		✓						✓
Flat Backs Hotfix	XILION Rose & XIRIUS Rose ¹	✓						✓
	Framed Flat Backs	✓						✓
	Creation Stones	✓						✓
	Creation Stones Plus ²				✓			✓
	Cabochons				✓			✓
Sew-on Articles		✓						✓
Self-adhesive Elements						✓		✓
Transfers	XILION Transfers & XIRIUS Transfers	✓						✓
	Creation, Diamond	✓						✓
	Metallic & Mezzo Transfers		✓					✓
	Creation Transfers Plus ²				✓			✓
	Pearl Transfers				✓			✓
Synthetics Hotfix	Crystal Fabric		✓					✓
	Crystal Rocks & Crystal Fine Rocks		✓					✓
	Graphic Fabric & Graphic (Fine) Rocks				✓			✓
	Crystal Medley		✓					✓
	Crystaltex ³		✓					✓
Plastic Trimmings	Basic Bandings	✓						✓
	Fishnet Bandings	✓						✓
	Decorative Bandings		✓					✓
	Plastic Components		✓					✓
Buttons, Fasteners & Zippers	Crystal Buttons	✓						✓
	Buttons with Plastic Shank		✓					✓
	Snap Fasteners & Decorative Buttons		✓					✓
	Jeans Buttons		✓					✓
	Buttons with Metal Shank		✓					✓
	Zippers			✓				✓
Metal Trimmings	Chaton & Flat Back Bandings & Spike Bandings				✓			✓
	Rivets, Square Rivets, Chessboard Rivets & Star Rivets		✓					✓
	Crystal Pearl Rivets				✓			✓
	Spike Rivets				✓			✓
	Roses & Chaton Montées		✓					✓
	Rose Pins, Chessboard Pins & Rhombus Pins		✓					✓
	Crystal Studs				✓			✓
Crystal Mesh					✓			✓
Cupchains & Findings						✓		✓

1 XIRIUS size SS 40 and SS 48: only wash with a hand wash program.

2 Creation Stones Plus have a stone size of 8 - 10 mm.

3 It is recommended to wash Crystaltex Cabochon with a hand wash program.

TEXTILE CARE INSTRUCTIONS

					
	Turn inside out and dry at reduced temperature.	Do not tumble dry!	Iron inside out using a silk/polyester/viscose setting. Ironing the textile inside out and using a pressing cloth is recommended.	Iron inside out using a wool setting.	Do not iron! Do not iron directly over the crystals.
Round Stones		✓			✓
Fancy Stones		✓			✓
Beads	Beads	✓			✓
	Crystal Mesh Balls		✓		✓
BeCharmed & Pavé		✓			✓
Crystal Pearls		✓			✓
Pendants		✓			✓
Flat Backs No Hotfix ¹		✓			✓
Flat Backs Hotfix	XILION Rose & XIRIUS Rose ¹	✓		✓	
	Framed Flat Backs			✓	
	Creation Stones	✓		✓	
	Creation Stones Plus ²		✓		✓
	Cabochons	✓		✓	
Sew-on Articles		✓			✓
Self-adhesive Elements		✓			✓
Transfers	XILION Transfers & XIRIUS Transfers	✓		✓	
	Creation, Diamond	✓		✓	
	Metallic & Mezzo Transfers		✓	✓	
	Creation Transfers Plus ²		✓		✓
	Pearl Transfers	✓		✓	
Synthetics Hotfix	Crystal Fabric		✓	✓	
	Crystal Rocks & Crystal Fine Rocks		✓	✓	
	Graphic Fabric & Graphic (Fine) Rocks		✓	✓	
	Crystal Medley		✓	✓	
	Crystaltex ³		✓	✓	
Plastic Trimmings	Basic Bandings	✓			✓
	Fishnet Bandings		✓		✓
	Decorative Bandings		✓		✓
	Plastic Components		✓		✓
Buttons, Fasteners & Zippers	Crystal Buttons		✓		✓
	Buttons with Plastic Shank		✓		✓
	Snap Fasteners & Decorative Buttons		✓		✓
	Jeans Buttons		✓		✓
	Buttons with Metal Shank		✓		✓
Zippers		✓			✓
Metal Trimmings	Chaton & Flat Back Bandings & Spike Bandings		✓		✓
	Rivets, Square Rivets, Chessboard Rivets & Star Rivets		✓		✓
	Crystal Pearl Rivets		✓		✓
	Spike Rivets		✓		✓
	Roses & Chaton Montées		✓		✓
	Rose Pins, Chessboard Pins & Rhombus Pins		✓		✓
Crystal Studs					✓
Crystal Mesh		✓			✓
Cupchains & Findings		✓			✓

TEXTILE CARE INSTRUCTIONS

					
		The textile can be gently dry-cleaned using perchlorethylene. Turn inside out.	The textile can be gently dry-cleaned using hydrocarbon. Turn inside out.	The textile will withstand gentle professional wet cleaning. Turn inside out.	The textile may not be dry-cleaned.
		To protect the crystals as much as possible, the use of a soft wash bag is recommended.			
Round Stones			✓	✓	
Fancy Stones			✓	✓	
Beads	Beads	✓	✓	✓	
	Crystal Mesh Balls		✓	✓	
BeCharmed & Pavé			✓	✓	
Crystal Pearls			✓	✓	
Pendants					✓
Flat Backs No Hotfix ¹			✓	✓	
Flat Backs Hotfix	XILION Rose & XIRIUS Rose ¹	✓	✓	✓	
	Framed Flat Backs	✓	✓	✓	
	Creation Stones	✓	✓	✓	
	Creation Stones Plus ²	✓	✓	✓	
	Cabochons	✓	✓	✓	
Sew-on Articles		✓	✓	✓	
Self-adhesive Elements					✓
Transfers	XILION Transfers & XIRIUS Transfers	✓	✓	✓	
	Creation, Diamond	✓	✓	✓	
	Metallic & Mezzo Transfers		✓	✓	
	Creation Transfers Plus ²	✓	✓	✓	
	Pearl Transfers	✓	✓	✓	
Synthetics Hotfix	Crystal Fabric		✓	✓	
	Crystal Rocks & Crystal Fine Rocks		✓	✓	
	Graphic Fabric & Graphic (Fine) Rocks		✓	✓	
	Crystal Medley		✓	✓	
	Crystalex ³		✓	✓	
Plastic Trimmings	Basic Bandings	✓	✓	✓	
	Fishnet Bandings	✓	✓	✓	
	Decorative Bandings	✓	✓	✓	
	Plastic Components	✓	✓	✓	
Buttons, Fasteners & Zippers	Crystal Buttons	✓	✓	✓	
	Buttons with Plastic Shank	✓	✓	✓	
	Snap Fasteners & Decorative Buttons	✓	✓	✓	
	Jeans Buttons		✓	✓	
	Buttons with Metal Shank		✓	✓	
	Zippers		✓	✓	
Metal Trimmings	Chaton & Flat Back Bandings & Spike Bandings		✓	✓	
	Rivets, Square Rivets, Chessboard Rivets & Star Rivets	✓	✓	✓	
	Crystal Pearl Rivets		✓	✓	
	Spike Rivets	✓	✓	✓	
	Roses & Chaton Montées	✓	✓	✓	
	Rose Pins, Chessboard Pins & Rhombus Pins	✓	✓	✓	
	Crystal Studs		✓	✓	
Crystal Mesh			✓	✓	
Cupchains & Findings					✓

GENERAL CARE INSTRUCTIONS

A light layer of dust is most easily removed with a clean, dry and antistatic cloth. To avoid unsightly fingerprints on the crystal, wear white cotton gloves during the cleaning process. For heavier dirt, lukewarm water with a little dishwashing detergent will suffice. Ideally you should use a damp and clean microfiber or thin, lint-free cotton cloth. Gently wipe each individual crystal and dry with a clean cloth. Again, wearing white cotton gloves is recommended.

When cleaning with moisture, make sure to use cleaning agents that do not damage the surrounding material. By correctly cleaning your Swarovski crystals, you will restore their full reflectivity.



Cloth

LAWS, REGULATIONS, NORMS & STANDARDS

The composition of loose and forward-integrated crystals in the Advanced Crystal standard is compliant with regulatory industry norms and laws regarding the restriction or prohibition of certain

substances for finished products in the most relevant segments of our customers' business.

WARNING NOTICES

General Warning



Loose crystals may present a small parts hazard to young children, particularly children under three years old. Depending on the size of the crystal and any attached material (such as glue, fabric, etc.), children may choke on, inhale, swallow, or insert the crystal into their noses. Magnetic products with crystal applications pose a particular risk of serious intestinal injury if ingested. The application techniques as stated in the Application Manual do not guarantee that crystals will not come loose. For each application, the manufacturer must determine whether the product meets the relevant requirements related to small parts hazards and assess any risk it may pose to small children. Failure to follow Swarovski's care instructions may result in damage to the crystal, which could pose a risk of laceration or other harm.

Warning for Crystal Tattoos

Crystal Tattoos may be applied on healthy skin only. Do not adhere to eyes or on mucous membranes. Crystal Tattoos are not recommended for young children. Loose crystals may present a small parts hazard to young children, particularly children under three years old. If a crystal comes loose, depending on the size of the crystal, children may choke on, inhale, swallow, or insert the crystal into their noses.

Warning for Magnetic Products

Loose crystals may present a small parts hazard to young children, particularly children under three years old. Magnetic products with crystal applications pose a particular risk of serious intestinal injuries if ingested. For each application of magnetic crystal products, the manufacturer must determine whether the product meets relevant requirements related to small parts hazards and assess any risk it may pose to small children.

Warning for Tableware

The application of loose crystals to tableware presents a potential risk of aspiration, choking, swallowing, or tooth damage should crystals become loose. To reduce this risk, crystals should never be applied to any surface of tableware likely to come in contact with food or the mouth, and crystals should never be placed on any tableware intended for use by children. Tableware with

crystals intended for decorative use only should be marked as such. To avoid dishwasher damage, tableware decorated with crystals should be washed by hand. The application techniques or suggestions in this manual do not guarantee that crystals will not come loose. For each application, the manufacturer must determine whether the product meets relevant requirements related to small parts hazards or use in food contact items and assess any risk it may pose to users.

The use of crystals (which may contain restricted substances deemed hazardous under local laws) and adhesives on tableware is subject to legal restrictions in specific countries. The customer is fully responsible for complying with these country-specific provisions and shall defend, indemnify, and hold Swarovski harmless from any and all third-party claims based on product liability or otherwise relating to uses of Swarovski products, and waives all its own claims against Swarovski.

Unsuitable Applications

Crystals from Swarovski are intended for use in the fields of fashion, jewelry, accessories, textile products, and for interior décor. Due to their physical properties, crystals from Swarovski are unsuitable for other uses (e.g. gluing onto teeth, using on or near mucous membranes, and other unsafe uses). The customer shall defend, indemnify, and hold Swarovski harmless from any and all third-party claims based on product liability or otherwise relating to uses of Swarovski products purchased by the customer, and waives all its own claims.

Responsibility of User

Any oral, written, or test-based advice that Swarovski provides regarding techniques for the application of its products are recommendations based on Swarovski's current knowledge and the information provided by its suppliers. Such advice does not discharge the customer from carrying out its own tests of techniques it proposes to use and their suitability for the intended application. The application, use, and processing of these techniques and products are solely the user's responsibility.

CARE INSTRUCTIONS

Not following Swarovski care instructions can damage the product and thus lead to damage of textiles or other damage.

Please note that with all standard washing processes (whether carried out by a household washing machine or via dry cleaning) the rotation of the drum places significant mechanical forces on the textiles. The most important factor in ensuring a secure wash is correctly applying the product, without compromising its adhesion. The larger the product employed, and the more products are applied next to each other, the greater the risk of damage. Swarovski products are made out of crystal or contain crystal and must thus be handled with suitable care.

In general, it is recommended that a soft wash bag is used and that the washer drum is filled to protect against damage. To maintain the quality of crystals from Swarovski, the following is also important: before washing, turn items of clothing inside out, select a gentle wash cycle, and use a mild detergent. According to DIN EN ISO 3758, our care instructions list all product groups, meaning each product used by customers must be assessed separately with regard to its washability and suitability for its purpose/the end product. The recommendations given by Swarovski reflect our current level of knowledge. Swarovski uses these recommendations to decide on the suitability of the product for textile applications. Customers are solely responsible for defining the recommended cleaning process for the end product, and must consider the care advice of Swarovski and any other manufacturers in doing so. The type of shape, cut, surface effect, and size, as well as the weight of the application and the quantity of crystals used has a significant impact on the cleaning process to be followed.

To avoid all risks, customers/textile cleaning companies should remove any large crystal stones, buttons, etc., that have been stitched on before cleaning, and stitch them back on again afterwards.

Content is subject to change without notice.

Errors and misprints excepted.

Please note, the actual products may deviate from the pictures in color and effect.

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