RON YOUNG WORKSHOPS

Iron, Steel & Aluminum Patina & Finish Workshop
Ron is well known for his work with non-ferrous (bronze, brass and copper) metals and patinas. He has been researching and applying this knowledge to patinas & finishes for ferrous metals (iron, steel and aluminum). The information he found about these patinas and finishes will be taught at the workshop. Learn the latest techniques for achieving beautiful finishes. All aspects of patinas and finishes for Iron, Steel & Aluminum are covered including both hot and cold techniques. Ron will also show the liquid Metal Coating, leafing, solvent dyes, water based dye oxides, mica powders, surface preparation, safety procedures, protective coatings, waxes and tools. Everything else you can think of (about patinas) will be explained. The patinas and finishes used in this workshop will be for Iron, Steel and Aluminum only.

Bronze, Brass, and Copper Patina Workshop
This workshop covers all patina techniques including traditional and new for bronze, brass and copper including hot, cold, buried, wrapped, fumed, and paste. Also, learn how to incorporate mica powders, pigments, and oxides into your finishes and patinas. Surface preparations, tools, safety procedures, clear coatings, waxes, leafing, and maintenance techniques will be taught. New patina techniques using dyes, dye-oxides, and metal coatings will be covered as well.

Special Workshop - Metal Coatings with Patinas
During this workshop you will learn about application techniques for the Metal Coatings. Learn surface preparation for the different materials and cold patinas on the Metal Coatings. There will be instruction on how to incorporate oxides, pigments, dyes, and iridescent powders. Safety procedures will be covered as well as clear sealers, waxes and maintenance information. This workshop will be hands on. Bring your own sculpture, up to 6”, or we will provide you with something. Each participant will be supplied with a kit with all the materials needed for the workshop: gloves, metal coatings, patinas, iridescent powder, brushes, applicators, primers, sealers, and wax.

For more information on our workshops:
www.sculptnouveau.com
800-728-5787
Torches

**UniWeld Products** - Sculpt Nouveau stocks these. (800) 728-5787  Ron prefers torches TH3 or TH5 & tips ST07MP 1 1/2” diameter or ST06MP 1” diameter.


**Sculpt Nouveau Products are now available at:**

- **Industrial Metal Supply** - www.imsmetals.com
  6 locations:
  - Sun Valley, CA (818) 729-3333 - 8300 San Fernando Rd.
  - San Diego, CA (858) 277-8200 - 7550 Ronson Rd.
  - Irvine, CA (949) 250 3343 - 2072 Alton Parkway
  - Riverside, CA (951) 300-9900 - 301 Main St.
  - Phoenix, AZ (602) 275-4131 - 4131 E. Washington
  - Tucson, AZ (520) 441-5900 - 3757 E. Columbia St.
- **Sculpture Depot** - 418 8th St. Loveland, CO 80537; (800) 260-4690
- **Townsend Atelier** - 100 Cherokee Blvd. Chattanooga, TN 37405: (877) 903-1488
- **Reynolds** - 4665 S. Ash Ave. #G-15 Tempe, AZ 85282; (888) 967-7727
- **Bity Mold Supply** - 523 Sterling Dr. Richardson, TX 75081: (888) 676-2489
- **Medwedeff Forge** - 695 Future Lane Murphysboro, IL 62966: (618) 687-4304
- **Art Chemicals** - 2300 Davis St. San Leandro, CA 94577: (510) 639-4670
- **The Compleat Sculptor** - 90 Van Dam St. New York, NY 10013: (800) 9-SCULPT
- **Barnes Products** - NSW Australia 2200 : +(612) 9793-7555
- **Sculpture Supply in Canada** - 345 Munster Ave, Toronto, Ontario, Canada M82 C63: (416) 234-1075
- **Palm Beach Sculpture Supply** - 14 Alabama Ave. #1 West Palm Beach Fl. 33401: (561) 832-3933  www.PalmBeachSculpture.com
- **Shellspen International** - PO Box 1741 Venice, FL 34284 (941) 951-2545  www.shellspen.com
- **Douglas & Sturgess** - 2 Locations:
  - 1023 Factory St. Richmond, CA 94801: (510) 235-8411
  - 730 Bryant St. San Francisco, CA 94107: (415) 421-4456  www.douglasandsturgess.com
Chapter 1: Defining Terms and Phrases

This guide is intended to provide a background and set of general instructions on using Sculpt Nouveau products. For a more comprehensive guide on patinas, please visit sculptnouveau.com to purchase Contemporary Patination for Bronze, Brass and Copper by Ron Young.

Defining Terms and Phrases

Patina - The color of the surface of metal caused by natural weathering or chemical application of acids.

Cold Patina - A process of applying patina chemical solutions directly to the unheated surface of the metal. "Cold Patina" is a term used for applying patinas without heating the metal. The best room or air temperature for these patinas is between 65° and 75° F. Cold patinas, once applied to the metal, require hours or days to react. Often they involve cycles of applications involving layers of patina. The three basic techniques of applying the patina are to use a brush, sponge, or spray bottle. There are also some very interesting ancient techniques where the metal object is buried in substances soaked with the patina or wrapped in cloth soaked with a patina. A characteristic of most cold patinas is that they are opaque.

Hot Patina - This is the most widely used technique. The surface of the metal is heated with a torch to open its pores, usually to around 200° F, then the patina chemical solutions are applied with a brush or spray. As the metal cools, the patina is locked in. An easy test for the correct temperature is to sprinkle a few drops of distilled water from a spray bottle onto the hot metal surface. If the water sizzles it is the correct temperature. If the water runs off, the metal is too cold. If the water balls up, it is too hot. A characteristic of some hot patinas is that they are transparent. There are three ways the metal may be heated: 1) The most common method is using a propane torch with a 5-gallon propane bottle or using a torch with a gas/air mix used with an air compressor; 2) Using a hair dryer or a paint peeler; 3) Placing the object in the sun or oven.

Torch - An instrument for bringing together and properly mixing of propane gases so that, when ignited, the heat of the flame is controlled.

Ferrous - A word used to describe compounds that contain iron, from the Latin word ferrum or iron.

Burnish - To rub back or polish by rubbing. Usually done with a fine "steel" wool or copper wool.

Oxide - A naturally occurring agent that causes the surface of metal to change color.

Bury Rag - pg 17, Fume - pg 17, Pop Off - pg 8, Red Bronze Disease - pg 6

Chapter 15: Helpful Products & Companies

Diamond Vogel - (800) 322-6126 www.diamondvogel.com
This is a water based primer - non hazardous shipping charges. Very reasonable price and nice people to talk with. The primer dries hard and strong. Apply two coats. Use under Metal Coatings for iron, steel & aluminum. Order # MC-1501 RUST-OLEUM - we buy this from Grainger’s. Rust-O-Poxy 5300. A low odor, two component, polyamine-cured water based epoxy coating. Designed for use in moderate to severe industrial environments for protection of steel structures. It can also be used on non ferrous and masonry surfaces. Provides excellent chemical, abrasion and corrosion resistance. Primers are formulated for use on clean, abrasive blasted, slightly rusted, or previously painted steel surfaces.

Putty for Bronze

Devcon Putty - www.devcon.com, They make metal filled putty in different metals.

Sprayers:

Vista Paint Store - 611 Sycamore Vista, CA (760) 598-0040 Use for patinas and some thinner lacquers. There are many other locations. Ask for the Crown Sprayer. They sell the sprayers for the same price as the manufacturer. You may buy them in cases of twelve. They carry whole sprayer sets or separate parts.

Leaf Materials:


Sprayer for Metal Coatings:

ES Manufacturing, Inc. - 2500 26th Ave North, St. Petersburg, FL 33713, (727) 323-4040. This was a great find! They make a gun that attaches to your air compressor unit that will spray on the Metal Coating. It is very simple and inexpensive, about $135.00, with a disposable paper cup feed. Ask for Model #G100. It comes packaged with nozzle #6. We also like to use #5 & #3. Also available at Sculpt Nouveau, the Compleat Sculptor, and Sculpture Depot.

Supplies/Tools

Sculpture Depot (970) 663-5190, www.sculpturedepot.net, This company stocks the tools and products needed to make sculptures. They use the products and are very helpful. They also carry lots of mold making materials.

This company stocks everything. They have mold materials, books, tools, waxes, and much more and carry all the best manufacturers. Call for their catalog.
SAFETY

Safety Measures
Personal protective equipment is extremely important when working with these strong materials!
Goggles and protective clothing function as a physical barrier between you and the material.
If material gets on your bare hands it could take a week to wear off. Please be very careful and always remember to wear gloves! In every case, skin and eye protection must be selected on the basis of the nature of the hazards presented by the product and procedure used. Since vapors and spray mists should not be inhaled, suitable ventilation must be provided or respiratory protection devices should be used.

Specific safety and health regulations regarding personal protections equipment are covered by the Occupational Safety and Health Act. #29CFR 1910/132-140.

Important
Volatile solvents may make the products flammable. Your work area must be clean and properly designed for use and storage of flammable liquids. They should be kept away from all sources of ignition including heat, sparks, flames, motors, burners, heaters, or pilot lights. All products and solvents should be stored in a flameproof metal cabinet.

BE VERY CAREFUL WHEN USING THESE PRODUCTS and KEEP OUT OF THE REACH OF CHILDREN!

Products purchased from Sculpt Nouveau are warranted “Free From Manufacturing Defects” only to the extent of replacing the defective material. Sculpt Nouveau believes these products may be used under conditions over which we have no control, or in ways we cannot anticipate. Therefore, we give no warranty; either expressed or implied, and assume no responsibility for any damages to persons, property, or business arising from such use. Moreover, it is the responsibility of the purchaser or user of these products to ensure that they are properly and safely used. No claim will be honored after 60 days from the invoice date. Sculpt Nouveau is not responsible for any data, information, or special markings not requested by the buyer at the time of order.

Magazines:

Anvils Ring - P.O. Box 1810 Georgetown, CA 95634, (314) 390-2133, www.abana.org Incredible source for iron and steelworkers.
Metalsmith - SNAG, 5009 Londonderry Dr. Tampa, FL 33647, (813) 977-5326, www.metalsmith.org - Carry metals including gold, more towards jewelry/art.

Mold Material:

Bity Mold Supply - 523 Sterling Dr. Richardson, TX 75080, (888) 676-2489, www.brickintheyard.com
Complete Sculptor 90 Vandam Street, New York NY 10013, (800) 972-8578, www.sculpt.com
Sculpture Depot - 418 8th St. SE Unit B-7 Loveland, CO 80537, (970) 663-5190
Ball Consulting - 4665 S. Ash Ave. G-15 Tempe, AZ 85282, (888) 967-7727
Palm Beach Sculpture Suppliers - 1400 Alabama Ave. #1 West Palm Beach, FL 33401, (561) 832-3933, www.PalmBeachSculpture.com

They publish the Maquette and Sculpture magazines (now one publication).

National Sculpture Society - Magazine, art show information.
Art Metal - www.artmetal.com, Large internet site where artists can collaborate. Many lists and links to suppliers. Very good information and articles.

Pigments/Oxides

Douglas & Sturgess - 730 Bryant St. San Francisco, CA (415) 421-4456,

Primers for Iron, Steel and Aluminum

Sculpt Nouveau's Prime-It - (800) 728-5787 www.sculptnouveau.com
Sculpt Nouveau's Red Oxide Primer may be applied to all metal surfaces and also to resin castings and shiny plastics. It is very tough and durable, is water based and has no volatile organic compounds (VOCs). Prime-It is also available in red and white.
METAL SURFACE CLEANING

The surface of the material you are working on should be clean and free of any dirt or grease. When working with iron, steel or aluminum you may want to remove rust and/or scale. When applying the Solvent Dyes or Metal Coatings to resins, epoxies, glass, or any very highly polished surface you may need to not only clean the surface but also slightly abrade it. The best method for cleaning most materials is to sandblast. Different types of blasting material may be used in order to keep the surface as you want it. Wire wheels or Scotch-Brite Pads are another method of cleaning.

Be careful not to leave any polishing compound on the surface. A good metal cleaner is a great way to get the surface ready to work on. Sometimes mild acids are used but often they can interfere with the patina process to come later. Sculpt Nouveau’s Metal Cleaner/Degreaser is a great metal cleaner. It works on both ferrous and non-ferrous metals.

Metal Cleaner/Degreaser - by Sculpt Nouveau
This cleaner was formulated especially for Sculpt Nouveau to clean all types of metal. It removes dirt, grease and rust.

Graffiti Remover/Metal Cleaner - by Sculpt Nouveau
This cleaner is a multipurpose, powerful, and natural cleaner degreaser.

Instructions for Application on Bronze, Brass, and Copper:
1. Apply the cleaner with a brush, sponge or rag.
2. Let stand on the metal for approx. 5 minutes.
3. Rub with a green or gray Scotch-Brite pad.
4. Rinse with water.
5. Repeat if necessary.
6. Dry the surface.
7. Apply the desired finish to the metal surface.

Instructions for Application on Iron, Steel, and Aluminum:
1. Repeat steps above but dry quickly and thoroughly so rust does not begin to form. Do not clean your metal until just before you are ready to apply the patina.
2. Apply your desired finish immediately to the clean metal. You must apply the patina as soon as possible and seal as soon as it is completely dry.

Instructions for Graffiti Remover/Metal Cleaner:
Test in a small inconspicuous area prior to use. Apply to a dry surface. Allow to soak for a few minutes. Scrub with a soft brush or a clean rag. Rinse with clean water. Repeat if necessary. If using on ferrous metals, do not rinse but wipe off well with a clean rag.

Chemicals:
Compleat Sculptor - 90 Vandam Street, New York NY 10013, (800) 972-8578, www.sculpt.com They stock most of the patina chemicals needed to make your own patinas and also have other patina products.
Art Chemicals - 2300 Davis St. San Leandro, CA 94577, (510) 637-8707, www.artchemicals.com

Casting Materials for Ceramic Shell & Waxes:
Bity Mold Material - 523 Sterling Dr. Richardson, TX 75080, (888) 676-2489, www.brickintheyard.com
Sculpture Depot - 418 8th Street SE Unit B5, Loveland, CO 80537, (800) 260-4690, www.sculpturedepot.net This company stocks the tools and products needed to make sculptures. They use our products and are very helpful. They carry lots of mold making materials.
Remet - 210 Commons Road Utica, NY 13502, (315) 797-8700, www.remet.com The best source for ceramic shell material.
Ransom & Randolph (Westech Products) - 1242 Enterprise Court Corona, CA (800) 654-3529www.westechproducts.com finishes. Clear Guard - a protective lacquer for all metals. It is a crystal clear, durable, air drying lacquer that results in a hard, fast drying, and tarnish resistant film. XIM – (800) 262-8469, http://www.ximbonder.com/ “900 Protective Finish” - specify for ferrous or non-ferrous metals.

Clear Coatings:
Sculpt Nouveau - (800) 728-5787, www.sculptnouveau.com - Ever-Clear 2K is a clear, air drying two part urethane coating designed to provide the best and strongest protection for most surfaces and finishes. It has very low VOC’s.
Smart Coat 1K - water based clear coating. Spray over patinas and finishes. No VOC’s.
Clear Guard - a protective lacquer for all metals. It is a clear, durable, air drying lacquer that results in a hard, fast drying, and tarnish resistant film.
Shields Up
Low VOC, non-discoloring, tough anti-graffiti coating for metal, rigid plastics, concrete, and wood.
PRIMERS

A primer will only be needed if you are applying the metal coating. It is critical to use a primer when the substrate you are applying the metal coating to is iron, steel, or aluminum. When working with a ceramic type of material, the primer is used only to keep the first coat of metal coating from being absorbed. The primer is also used to help with adhesion of the metal coating on certain surfaces.

Water Base Ceramic Primer - by Sculpt Nouveau

This primer is used to prepare porous material before applying the metal coating. If the surface of the material is not porous, you do not need to use this or any primer. The only reason for using this primer is to stop the substrate from absorbing the first coat of metal coating. It will not do any harm to apply the primer if you are unsure of the porosity. This primer is not good enough to use as a primer for iron, steel, or aluminum.

Instructions for Application:
(1) Make sure the surface of your material is clean.
(2) Apply the primer with a brush, sponge or airbrush.

When these types of materials are going to be placed outside be sure to seal all sides (bottom and insides also) so moisture will not be able to enter. A commercial concrete sealer would be advisable for material that is going to be lying directly on the ground.

Prime-It - by Sculpt Nouveau

Prime-It is a tough and durable water-based primer. Sculpt Nouveau’s Red Oxide Primer may be applied to all metal surfaces and also to resin castings and shiny plastics. Prime-It is a great product to use over polyurethane products before using the Metal Coatings. It is very tough and durable, is water based and has no volatile organic compounds (VOCs). Also available in white and rust.

Instructions for Application:
(1) Clean metal first with a good quality metal cleaner/degreaser, then sand if possible.
(2) Clean metal again, then rinse again. (No special prep is needed for other substrates, other than cleaning, although some sanding is recommended.)
(3) Apply Sculpt Nouveau’s Prime-It by brush, roller, sponge or spray. Apply two layers of primer. Wait 2-6 hours between coats. Wait a minimum of 8 hours (24 hours for best results) before applying the Metal Coating. Waiting longer than 8 hours will not affect the process.
(4) Clean up with soap and water.
Patina Groups

There are two main categories of patina: 1) Those which contain acids; 2) Those which do not contain acids. This is important to know if you are wishing to patina iron, steel, or aluminum as acids will cause rust or oxidation.

Types of Patinas Sculpt Nouveau makes:

1. Traditional Patinas - All contain acids
2. Universal Patinas - Do not contain acids
3. Vista Patinas - All contain acids
4. Dye Oxide Patinas - Do not contain acids
5. Patina Stains - Do not contain acids

Each type of patina is available in a range of colors. The colors may be mixed together within the group to form a different shade, except for the Traditional Patinas which may also be applied one over the other. The different types may be applied over each other or mottled around areas to make the patina more interesting.

Note: When layering the different patinas it’s best to apply the types with acids first. When applying patina to Metal Coating - every patina should be applied cold.

When working directly on real metal, the most important factor in using Sculpt Nouveau’s products successfully will be to have the surface of the metal clean. Sandblasting is the best way to achieve this. An orbital sander may be used on flat surfaces, although if this is not an option, Sculpt Nouveau Metal Cleaner or Graffiti Remover/Metal Cleaner is what we recommend.

When using a patina from a group that does not contain acids, warming the metal is the best way to get them to adhere. Warming can be done by: (1) Putting the metal in the sun; (2) Using a heat gun or paint peeler; (3) Using a patina torch.

Sculpt Nouveau’s patinas do not protect the metals from further natural changes once they have been applied. Also, most patinas will have a chalkiness, which will rub or rinse off. We recommend applying a clear sealer once the patina is finished.

Traditional Patinas - All Contain Acids

Some of these are old formulas or variations of old formulas. Many of these patina formulas are available in our books and videos and have been pre-mixed by Sculpt Nouveau. Most of these patinas are for bronze, brass or copper. The green and blue Traditional Patinas will cause rust on iron and steel. Japanese Brown, Antiquing, Darkening and Tan work well on iron and steel and are to be applied to clean, cold (65° - 70°) metal. Japanese Brown and Tan can be applied to heated metal.

BOOKS by RON YOUNG

Contemporary Patination
For Bronze, Brass & Copper

Many techniques for coloring metal with chemicals are as old as the formulas for metal alloys themselves. Today, patination is the application of chemicals to the surface of metal in order to transform its appearance. In this edition of his book, Contemporary Patination, Ron Young shares step by step instructions for creating, applying, and protecting over 50 classic patina formulas. Nearly every patina method is covered including hot, cold, buried, wrapped, fumed and paste patinas. Full color plates are provided for each patina formula to assist in the visualization of each finish. Also detailed is proper metal preparation, recommended equipment, application tips and methods, and sealing considerations for both indoor and outdoor environments. In over 400 pages, Ron Young reveals his extensive knowledge of the patina process taken from over 45 years of experience. Coming soon!

Methods for Modern Sculptors

Methods for Modern Sculptors is a “how to” book for the hands on type of sculptor who wants to learn to cast their own metal. Authored by Ron Young who is highly experienced in art and metal casting, the book covers waxes, sprues, mold making, ceramic shell casting, dewaxing, melting and pouring metal, welding, chasing, cleaning, and polishing. Complete details on formulation and handling of ceramic shell slurries are included along with how to build kilns and furnaces.
CHAPTER 13: Sprayers and Torches

Some patinas (*) may also be applied hot. Re-apply if the color is not intense enough. The patina will be chalky. Apply a clear sealer when finished.

Light Green  Tiffany Green
Mint Green (*)  Blue - indoor only
Mahogany  Powder Blue - indoor or outdoor
Tan (*)  Ferric Nitrate/Ferric Chloride (Brown)(*)
Cupric Nitrate (*)  Ferric Chloride (Brown)(*)
Antiquing  Japanese Brown (for steel & iron)(*)
Darkening  All Birchwood Casey Patinas
Black Magic  Stainless Steel Black
Slate Black  Zinc Gray

Traditional Blue & Green Patinas for Bronze, Brass & Copper
Note: Always allow these patinas days to fully develop before applying a clear sealer.

Cupric Nitrate (Hot Patina)
Clean the metal first as with any other patina. Spray, brush or sponge on the Cupric Nitrate. Rinsing the patina is optional; it will "smooth" out the patina. This patina looks great directly on the metal, as well as over a base brown patina such as Liver of Sulfur, Birchwood Casey M-20, M-24, or Ferric Nitrate. If used on iron or steel, rust will occur. Don't use on Aluminum. Applying wax directly to the patina will darken it significantly and is not recommended. It is always best to spray a sealer or lacquer on after the patina has cooled. Note: this patina may cause "Red Bronze Disease" if it is put on silicon bronze outdoors. To help eliminate this, add a pinch of zinc dust to the patina. For indoor or outdoor use.

Powder Blue Patina (Cold Patina)
This is a stable blue for outdoor work. Clean the metal first as with any other patina. Spray, brush, or sponge on the Powder Blue Patina. Let the reaction work for 2 - 6 hours. Reapply if a deeper color is desired. No rinsing is necessary. This patina may also be used on Metal Coating. If used on iron or steel, rust will occur. Don’t use on Aluminum. Set with a clear sealer when done. For indoor or outdoor use.

More Cold Patinas for Bronze, Brass & Copper

Indoor Blue - Use in the same manner as the Powder Blue. This is the original Blue Patina. It will form a beautiful pale natural blue color.
Tiffany Green - Use in the same manner as the Powder Blue. This is a beautiful stable green. It is an old formula developed by Tiffany for Tiffany lamp bases. If it is overlapped or applied heavily it may “pop off” and will tend to go a little blue. Tiffany Green tends to be slow to react, but worth the wait. Let it sit overnight to see the results.

CHAPTER 5: Patina Groups

Patina Groups

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SPRAYERS

Touch Up Spray Gun:
The Touch Up Gun is used for the even application of lacquers, Solvent Dyes, or Patina Stains.

Patina Sprayers:
The Zep Sprayer is a manual sprayer which has an adjustable droplet size.
The Crown Sprayer is powered by an aerosol propellant and creates a fine smooth mist. Moreover, it may also be used with lacquers, dyes, and acid patinas. Extra Crown Sprayer bottles are also available.

G-100 Gel Coat Spray Gun:
The G-100 attaches to an air compressor and uses a disposable paper cup. It is a siphon fed unit that is very easy to use. We recommend this unit if you have a large area to cover with the metal coatings. The G-100 spray gun comes packaged with a #6 nozzle; we add two smaller nozzles for use with the metal coatings and five extra cups. We have found this to be a great, simple, inexpensive spray gun to apply Metal Coatings and may also be used for sandblasting, spraying mold material and other thick materials. Be sure to order an extra smaller nozzle, a #3, #4, #5. We have these in stock.

Other sprayers for the Metal Coating that are less expensive are:
Harbor Freight – Available online at www.harborfreight.com. This is a very inexpensive version of the above spray gun for the Metal Coating. It works very well with the one nozzle provided. Harbor Freight - Central Pneumatic Professional 20 oz Gravity Spray Gun - Item 47016. Also available at Sculpt Nouveau.
Critter Sprayer - Available online at www.amazon.com. This sprayer is about $40.00. It has one nozzle, but works well for the metal coatings. Critter Spray Products 118SG / 22032 Siphon Gun.

Torches

The following components are needed to make a patina torch: small propane tank; regulator; hose; torch handle and torch tip. The torch tips are available at Sculpt Nouveau in 1” and 1.5” sizes. The torch tip connects to the torch handle. The smaller torch tip is recommended for most patina jobs. Propane tanks may be purchased at any welding supply store.
Light Green - Use in the same manner as the Powder Blue. This is a beautiful stable green outside. It may tend to “pop off” if applied too heavily. Mist on lightly and let it react, then reapply if necessary to deepen the color. This patina tends to have some yellows in it. This patina reacts quickly.

Mint Green - This is a great hardworking patina. It is an exception in that it may be used hot or cold. There is no chance of Red Bronze Disease with this patina. It is a good substitute for Cupric Nitrate - Statue of Liberty color.

Transparent, Traditional Brown Patinas for Bronze, Brass & Copper

Liver of Sulfur - This is a very old base patina. It even works well for large outside bronzes because it is relatively easy to apply and provides an attractive and relatively warm brown. You must mix this solution fresh each time you patina because it does not keep well. Store in a cool dry area. Combine 1 teaspoon with 1 pint of water. Liver of Sulfur must be washed thoroughly before any other patinas are applied.

Cold Technique: Using a brush, spray bottle, or sponge, evenly cover the surface of the metal. Let the metal sit for 5 minutes, then wash the metal in cold water to neutralize the Liver of Sulfur. You may wish to use steel wool or a gray 3M pad to highlight the sculpture. For a darker color, use additional Liver of Sulfur.

Hot Technique: Heat the metal with a torch until it is hot to the touch. Then apply the sulfur solution sparingly with a brush, using circular or stippling motions and working across the surface until the desired color is established. The patina will turn dark very fast when the metal is hot, so if you require a light brown, apply it cold. You may need to burnish the surface with steel wool or Scotch-Brite to even out the patina. Rinse with water to neutralize the patina.

Mahogany Patina - This is a beautiful brown patina you may wish to use instead of Liver of Sulfur.

Cold Technique: On a polished surface a beautiful transparent brown patina can form with swirls of color. On a non-polished surface a nice mottled brown will occur.

Hot Technique: If used hot, iridescence will form. After the patina has dried you may wax or apply a lacquer. Mahogany Patina may darken stainless steel also.

Ferric Nitrate/Ferric Chloride (Cold or Hot) - This can be used for bronze, brass, copper or metal coatings and will result in a very beautiful rich brown color when used hot. Clean the metal first as with any other patina. Apply with a brush, spray bottle or sponge. If applied full strength it will create a dark brown. If diluted by 50% distilled water it will create a rust/brown on real metal only. If you rinse it with warm water it will make rust-brown. This patina may be used on our coatings for a rust brown. Do not rinse on the metal coating. If used on iron, steel or aluminum. This kit includes Metal Cleaner, Matte Clear Guard Lacquer and Matte Smart Coat 1K - all 8 oz. Also included: 4 oz Prime-It and Texture Paint, Metal Coatings Type B in Iron, Pewter & Silver - 4 oz, also Bronze, Brass & Copper in 8 oz and an 8 oz Silver Metal Coating Type C, 11 Traditional Patinas, Birchwood Casey PC-9, two Dye Oxide Patinas, two Vista Patinas, eight Universal Patinas - all 4 oz, 2 oz containers of Iridescent Powder and Liver of Sulfur, Presto Black Gel - 2 oz, three 2 oz Waxes for ferrous metals, Copper Rub sample, 4 oz Black Patina Stain & Smart Stain, two 1 oz Solvent Dyes, 4 oz Dye Thinner, Clear Guard Lacquer Satin Spray & 2 oz Clear Metal Oil is also included.

PATINA KIT - All Traditional Patinas, Dye-Oxides, Universals & Vista Patinas in 4 oz (58), four Birchwood Casey Patinas - 4 oz, 8 oz. Metal Cleaner, Smart Coat 1K Satin top coat, Satin Clear Guard Spray, 2 oz Metal Oil and Liver of Sulfur & 2 oz of Clear Wax for ferrous metals and 2 oz Clear Wax for non-ferrous metals.

DYE OXIDE KIT - A sample of all 13 Dye Oxide colors available in 4 oz containers, plus 8 oz containers of Metal Cleaner & Smart Coat 1K, Satin Clear Guard Spray Lacquer, 2 oz Clear Wax for ferrous and 2 oz Clear Wax for non-ferrous metals.

WAX KIT - 2 oz of each wax color and clear, nine colors in all – black, blue, brown, green, red, verde, white yellow and orange. We have two types of wax, one for bronze, brass, copper & aluminum and the other is made for iron and steel. Specify which type of wax you prefer.

UNIVERSAL PATINA KIT - All Universal Patinas in 4 oz containers (14), plus 8 oz containers of Metal Cleaner & Smart Coat 1K, 2 oz of Clear Wax- ferrous, 2 oz Clear Wax for non-ferrous & Satin Clear Guard Spray Lacquer.

TRADITIONAL PATINA KIT - A sample of every Traditional Patina including (4) Birchwood Caseys - 4 oz, Metal Cleaner & Smart Coat 1K- 8 oz, Metal Oil - 1 oz, Liver of Sulfur - 2 oz, Clear Wax for ferrous and Clear Wax for non-ferrous metals - 2 oz, and Satin Clear Guard Spray Lacquer.

SMART STAIN KIT - All 17 colors of Smart Stains (4 oz), Metal Cleaner, Smart Coat 1K Satin, & Smart Coat 1K Matte both in 8 oz; 2 oz Clear Wax for ferrous metals and 2 oz Clear Wax for non-ferrous metals.

METAL COATING KIT - All 6 Metal Coating B & 5 Metal Coating C- 8 oz, Metal Cleaner, Prime-It, Satin Smart Coat 1K, Tiffany Green Patina - all 8 oz, Clear Guard Lacquer Spray, 2 oz black Wax for non-ferrous metals, 2 oz Clear Metal Oil and 2 oz Liver of Sulfur Patina.
CHAPTER 12: Kits

SCULPT NOUVEAU’S KITS

Sculpt Nouveau has put together sample kits of our products so that you will be able to try out the different techniques. The quantities are sufficient to allow you to make samples and experiment. Most are 4 oz. sizes.

SOLVENT DYE KIT - Contains all 10 colors of our 1 oz solvent dyes, 8 oz dye thinner, 8 oz metal cleaner, 8 oz Clear Guard Lacquer - Satin, 2 oz Clear Wax for ferrous metals and 2 oz Clear Wax for non-ferrous metals, Deft Spray, 8 oz Smart Coat 1K- Satin and an instruction book. Nine of the dye colors are transparent with the white being opaque. The dyes blend easily to create any color and may be applied to any surface, including ferrous metals and glass. You may also use the dye to tint resins, epoxies, clear coatings and waxes.

SUPER KIT - With this kit you could go straight into your studio and start working on finishes. The kit includes: Everything in the Solvent Dye Kit plus all 22 Traditional Patina colors - 4 oz, Birchwood Casey Patinas (A-14, M-24, M-38, & PC-9) - 4 oz, Dye-Oxide Patinas in all 13 colors - 4 oz, Universal Patinas in all 14 colors - 4 oz, Vista Patinas in all 9 colors - 4 oz, 5 Metal Coatings Type B - 8 oz, Pewter Type B - 4 oz. All Metal Coatings Type C - 8 Oz, 4 Iridescent Powder colors - 2 oz, Wax for ferrous metals (4 colors & clear) - 2 oz, Liver of Sulfur sample, Ceramic Primer - 8 oz, Prime-It Primer - 8 oz, 4 oz Texture Paint, 4 oz each Patina Stain - Black, Brown & Verde. Metal Rub in every color - 1 oz. 1 oz sample Metal Oil set, Age-It - 4 oz, smart Stains in 17 colors - 4 oz, Smart Coat 1K Matte - 8 oz, Clear Guard Spray Satin - 12 oz, Air & Manual Sprayers to apply the Coatings & Patinas, sponges, brushes, steel wool, synthetic wool, easy instructions.

FINISH KIT FOR CERAMICS - This kit contains the products needed to apply a finish to ceramics. We have exclusively selected water base products. Included: Water base Ceramic Primer and Smart Coat 1K - a water base clear coating in 8 oz, Type B metal coatings in all 6 colors and 2 Type C Metal Coatings - all 8 oz, 4 oz containers of 9 Traditional Patinas, two Vista Patinas, three Universal Patinas, two Smart Stains, and three Water Base Dye Oxides, one 2 oz container of Iridescent Powder, two 2 oz Waxes, Liver of Sulfur sample, 4 oz texture paint, 1 oz Copper Metal Rub, 4 oz Prime-It and 12 oz Clear Guard Lacquer - Satin. All these products are applied cold to ceramics.

VISTA PATINA KIT - This kit contains 8 oz Metal Cleaner, all 9 Vista Patinas in 4 oz, Wax for ferrous and non-ferrous metals - 2 oz, Smart Coat 1K Satin - 8 oz, and 12 oz Clear Guard Spray Lacquer Satin.

CHAPTER 5: Patina Groups

Japanese Brown Hot or Cold Patina for Iron & Steel (Cold or Hot) - This patina may also be used on brass, bronze and copper. This is a remarkable discovery for Sculpt Nouveau. Japanese Brown causes a real chemical reaction on the metal surface. Clean the metal surface before application. If the metal is smooth it will be a shinier patina. If the metal surface is sandblasted it will look more satin. Rust will occur if a clear sealer is not applied quickly after drying. Heat will darken the color as well as make it less mottled. No need to rinse. Don’t use on aluminum.

Darkening Patina - Hot or cold Patina for Iron & Steel (Cold or Hot) This patina may also be used on bronze, brass and copper. Use just as with the Japanese Brown. It creates a beautiful brown color. Apply a clear sealer or wax within a few hours.

Slate Black (Cold or Hot) is a versatile and unique finish for use on iron, steel, stainless steel, aluminum, bronze, brass, or copper. Applied hot, Slate Black will create a deep brown patina on aluminum and a red-green finish on stainless steel. On iron, steel, and nonferrous metals, Slate Black will form a black patina when applied cold. Before applying this patina, sandblasting or sanding is required to clean the surface of oil, oxides, and residues. Slate Black may be applied as a spray or in an immersion process. Depending on the application method chosen, the results will range from a uniform solid color to a layered textured appearance. Slate Black Patina may be diluted up to 50% with distilled water depending on the desired strength of finish. The finish may be burnished wet or dry. Additional patinas can be layered over a Slate Black base. When dry, protect the finish with multiple coats of a clear sealer.

Black Magic (Cold application) - This patina instantly creates a beautiful rich black patina on clean iron & steel. Rust will not occur immediately as with other darkening patinas. Water rinsing is a good neutralizer and will not cause rust. Rust will occur after 12 hours if a clear sealer is not applied.

Stainless Black Patina (Cold) is made to create a black patina finish on stainless steel. Clean the metal surface before application. Sanding the surface will help the patina react. Apply by spray or emersion. The solution may be diluted with distilled water but it usually used full strength. The amount of dilution will depend on your metal and the color desired. A normal dilution range would be between 25% - 50%. Apply a clear sealer. Tinted clear stains are beautiful when applied over this patina.
Birchwood Casey Patinas

Birchwood Casey makes different formulas for the different metals. For bronze, brass and copper there are choices of brown or black applied by spray, brush or immersion. There are separate formulas for iron, steel and aluminum.

The patina solution comes concentrated and is then diluted from 1 part distilled water to 1 part Birchwood Casey to 3 parts of distilled water to one part Birchwood Casey. Using the solution too strong will cause many problems. Only the sample sizes from Sculpt Nouveau have been diluted for you. When you are working with the metal coatings you will need to follow the same instructions you would for applying a patina. Apply Birchwood Casey products when the metal coatings are wet or dry. The best results are achieved when the metal coating is dry and rubbed in with steel wool. In some cases you may see some white areas form along with the darker areas on the metal coating. Wash the coating with a gray Scotch Brite pad very softly to remove the white areas. The reaction will be different with each metal coating type, metal type, or over each patina.

Vista Patinas

Vista Patinas contain acids as well as oxides. They are exclusively cold patinas, except for Vista Green. Vista Patinas were designed to give a consistent patina color. Often with an acid patina, the color will vary depending on the weather or other variables. The consistent color of the oxide is pulled into the acid reaction and a predictable patina is formed.

When used on bronze, brass and copper the Vista Patina creates a two-part, marbleized effect of a green patina plus the Vista color. When used on iron or steel, the acid base will cause beautiful rust plus the Vista color. It is best to use only one Vista color. If you want to introduce other colors to your patina, apply a non-acid patina over it. As with all cold patinas, try to apply out of direct sunlight and in moderate temperatures. Vista patinas react better when cool and stop reacting when warm. The reaction may not have taken place because the patina dried too fast. Allow 2-12 hours to react. Reapply if the color is not intense enough. The patina will be chalky. Apply a clear sealer when finished. Make sure the sealer is thinned enough to soak into the patina completely.

<table>
<thead>
<tr>
<th>Black</th>
<th>Blue</th>
<th>Brown</th>
<th>Burgundy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Red</td>
<td>Rust</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

Universal Patinas

Sculpt Nouveau’s Universal Patinas come in a wide range of opaque colors. These patinas bind onto the metal surface. They do not react. The color of these patinas will remain the same. The Universal Patinas do not contain acids and therefore

WHY DO I GET ‘FISH EYE’?

1. Oil or water in your air line
2. Dust on the surface of your metal
3. Too much air pressure

How to fix:
1. Put a filter on your air line
2. Clean the metal
3. Spray in another area
4. Check manual for best air pressure
5. As soon as you are done spraying, spray a fine mist of Zylene to take out the “fish eye”, then spray the coating again.

WHY DO I GET ‘ORANGE PEEL’?

1. Too much air pressure
2. The coating is too thick
3. Spray gun is too close to the surface

How to fix:
1. Turn air pressure down
2. Thin down the coating
3. Move the spray gun back from the surface
be compliant with the EPA, it is strong, clear, and has a fast tack time. Full cure
time will be four to five days.

Ever-Clear two-part is available in 16oz., 32oz, 1 gal., and 5 gallon sizes in satin,
gloss and flat finishes. It is packaged with detailed instructions and filters for mixing. One gallon typically covers 125 sq. ft. with the recommended 2 coats.

Sculpt Nouveau Graffiti Remover
Sculpt Nouveau Graffiti Remover has no VOC’s and is non hazardous.
Sculpt Nouveau Graffiti remover is a multipurpose, powerful, and natural cleaner
degreaser. This concentrate quickly emulsifies grease, paints and oils without the use of harsh
chemicals. Besides removing graffiti, it is an effective cleaner for many other surfaces both indoor and out
including metal surfaces, concrete and painted surfaces.
This product will also remove most inks, adhesives, tar and asphalts and most
spots that are removed by solvent based cleaners and paint removers.
Directions: Test in a small inconspicuous area prior to use to establish the effects
of this product on the surface to be cleaned. Apply to a dry surface. Allow to soak for a few minutes. Scrub with a soft brush or a clean rag. Rinse with clean
water. Repeat if necessary. Porous surfaces may need a stronger solvent based cleaner. Shields Up Anti-Graffiti Coating will protect painted and porous surfaces.
It should be applied to protect surfaces from graffiti and after the graffiti has been removed.

Sculpt Nouveau Solvent Thinner
Sculpt Nouveau Solvent Thinner has no VOC’s and is a very effective replacement for Xylene. It may be used to thin all solvent products.
For best results when spraying a solvent lacquer, thin with up to 20% Sculpt Nouveau Solvent Thinner. Wear gloves, goggles and protective clothing. Do not ingest.

Sculpt Nouveau Graffiti Remover

Dye Oxide Patinas
The Dye Oxide Patinas do not contain acids. They are UV safe indoor or outdoor
oxides. They may be applied hot or cold to any metal including iron, steel, and aluminum without causing rust. They do not react with the metal. The color of these patinas will remain the same. They will not change as with an acid patina. The metal surface needs to be clean before application. The Dye Oxide Patinas are transparent. Denatured alcohol (10%) may be added to help adhesion. Reapply if the color is not intense enough. Apply a clear sealer when finished.

Smart Stains
Smart Stain is a strong, non-hazardous, fast drying patina system. It has no VOC’s
and no odor. Smart Stain contains UV inhibitors and will not fade outdoors if maintained properly. It will clean up with warm, sudsy water.

Smart Stain is very versatile. The products are a cross between the water based
Dye Oxides and a patina. All colors are transparent and may be blended or
layered onto any metal including iron, steel and aluminum. We recommend when applying Smart Stain onto a bare surface that the surface be oil-free and
slightly roughed up. To alter or enhance the color, Smart Stain may be applied over another patina surface or metal coatings once dry.

Smart Stain is made by combining finely ground, naturally occurring colored
oxides with a water base polymer/resin binder. It is sold concentrated and may be diluted with distilled water up to 25% to increase transparency. Only Smart Coat 1K should be used to dilute any further.
Instructions for Application:
(1) Shake well.
(2) Clean surface of material and make sure it is completely dry before applying Smart Stain.
(3) Apply by spray, sponge, or brush. Apply as many coats as needed to achieve the desired color, making sure the first layer of stain saturates the rust or patina. Allow 2 hours to fully cure between coats.

For exterior applications, Smart Stain should be sealed with three layers of Smart Coat 1K (with a two hour drying time between each layer). Maintenance requirements will vary by location. In most environments, regular application of a wax or oil is sufficient to maintain this finish.

Patina Stains

Patina Stains are blended to match chemical or traditional patinas without the fuss. They are pre-blended Solvent Dyes and Clear Guard. Thin stain with Sculpt Nouveau’s Solvent Thinner or Xylene to lighten the color. Patina stains are very concentrated, so dilution is usually desired.

One gallon covers approximately 300 sq/ft. Patina Stains are UV stable. Spray, rag or brush on any metal.

Brown (oil rubbed bronze)       Black (gun blue)
Verde (copper green)            Yellow (golden)

Note: Brown & black colors are transparent just like the traditional patinas they duplicate. Yellow is also transparent and helps bring out golden tones.

Instructions for Application:
(1) If working on non-patinaed metal, clean the surface as needed. Examples would be: Wipe down with a clean cloth, sand or burnish with a Scotch-Brite pad. Clean with Sculpt Nouveau's Graffiti Remover or Metal Cleaner
(2) Make sure that the surface is completely dry by heating with a heat gun or patina torch.
(3) Applying with a sprayer will give the most consistent results. You may also apply with a brush or sponge.
(4) Let the Patina Stain cure a minimum of 2 hours and apply more coats if desired. You may also layer on different colors of Patina Stain.
(5) Apply as many coats as needed, making sure the first layer of stain saturates the rust or patina if this is on your surface.
(6) Apply 1-2 layers of clear finish. This will depend on your situation (indoor, outdoor, what type of metal - more layers of clear for ferrous metals).
(7) Apply clear or colored wax 24 hours after the last layer of clear sealer.

Clear Guard - by Sculpt Nouveau

Clear Guard is a clear, durable, air drying lacquer that results in a hard, fast drying, and tarnish resistant film. It has excellent adhesion to bronze, brass, copper, and other metals as well as to patinas and rusted metal. Clear Guard is suitable for use with all types of application equipment including sprayers. Because of its unique chemistry, orange peel is virtually non-existent. Clear Guard is UV stable and highly resistant to weather, water, and chemical damage. It also resists marring and perspiration better than most solvent lacquers.

*Clear Guard Benefits:  *Water white  *Mar resistant  *Perspiration resistance  *Mar resistant  *Excellent chemical resistance  *Ease of application  *Ready for use  *Excellent appearance  *Repairable  *UV and weather resistant  *Highly resistant to water and chemicals

Ever-Clear - by Sculpt Nouveau

Ever-Clear 2K is a clear, air drying two part urethane coating designed to provide the best and strongest protection for most surfaces and finishes. We have been able to reduce the VOCs and also improve the two part formula. Ever-Clear is not a water based formula. Use Sculpt Nouveau Solvent Thinner when reducing Ever-Clear in order to keep the VOC level low. Ever-Clear tacks up quickly. Ever-Clear should be used for the difficult finishes such as counter tops, fountains, or ocean environments. It works extremely well on all metals; wood, terracotta, ceramics, and concrete. Ever-Clear provides unusually strong under-film tarnish protection. When deciding which two part clear coating to choose, Ever-Clear would be the best in all circumstances as it will
SOLVENT DYSES - by Sculpt Nouveau

Ron Young developed the Solvent Dyes because of the need to match finishes while doing restorations. The dyes may be applied over a new or an existing surface treatment or over a patina. If you apply a patina and it doesn’t have the look you want, just touch it up with the needed Solvent Dye color. These Solvent Dyes were designed as a tool to enable you to apply a difficult color (violet, red...) to a difficult material (steel, glass, resin...), to change or enhance an existing color, or to repair a damaged finish. The dyes are to be blended with each other to create the colors you want. There is no color or shade that cannot be made with these dyes. All the primary and secondary colors are transparent. The white color is opaque. Adding white to the transparent colors will make opaque colors and pastels. The colors are very concentrated. Dilute the dyes with the Sculpt Nouveau Dye Thinner to obtain the desired transparency. To make a very faint or extremely transparent color, add the dye to a solvent lacquer (like Clear Guard) and apply. The dyes are now UV stable in all colors.

The Solvent Dyes can be used to tint epoxies, resins, clear coatings, and waxes. They may be used directly on any material, including glass. The surface may need to be slightly abraded if it is too smooth, to help the dye bind. The dyes may be applied directly on galvanized metal, non-ferrous metal, ferrous metal, and aluminum without corrosion occurring. The dyes will duplicate any chemical patina color directly on the metal surface, or create a new look. The dyes look great over any leaf product or non-reactive metal like gold or silver. Drop the dyes into resins, epoxies, or wax, and mix to tint the color. The dye may be applied over the dry metal coating and may also be applied over a patinaed surface. This makes altering a patina-gone-wrong very easy.

The dyes may be applied in any manner. Each different application technique will change the way the dyes appear. Sponging will give texture as with a cold patina. An airbrush will create an even coloring as with a hot patina. The dyes are very easy to manipulate and can be applied directly on any surface. This is especially important when working with ferrous metals. The Solvent Dyes contain the best binders and UV inhibitors available. We suggest your surface have a slight bite to it before applying. Once dry, the Solvent Dye is permanent and may be used on exterior work. While you are applying the dye it may be lifted off with alcohol. A protective clear sealer is necessary after the dye has dried, unless the sealer was the majority of the mix applied. Always spray on the final protective clear sealer or there is a risk of disturbing the dye finish.

Shields Up - Anti Graffiti Coating made by Sculpt Nouveau

**SHIELDS UP** is a self crosslinking polyurethane dispersion. It is intended to produce non-discoloring, high performance, protective top finishes for metal, rigid plastics and wood. Shields Up shows exceptional resistance to abrasion, hydrolysis, oxidative discoloration, impact, solvents and staining. Optimum film properties can be achieved by drying coatings at room temperatures. Crosslinking of the polymer occurs during the drying cycle, and approximately 90% of the film properties develop after overnight drying. Shields Up will be fully cured in 7 days.

**Surface Preparation:** Surfaces to be coated must be sound, clean, dry and free from oil, grease and other contaminants. To achieve good bonding and drying, the ambient temperature should be between 50° F and 85° F with a humidity below 85%.

**Application:** Mix well. Mix in one Activator. Let sit for 5 minutes. Apply 2 light coats. Allow 1 hour or more between coats. If spraying, use a HVLP sprayer at 20 - 50 psi.
The dyes may be reworked after they have dried by applying more dye over them. More dye may be layered over the protective sealer also. Note: Be sure to reapply another layer of protective sealer when finished. When spraying Clear Guard over the dye finish, movement or blurring of the dye may occur. To avoid this, spray a light coat of Deft wood spray.

Protect your hands and work area. Wear a breather mask and work in a well ventilated area. Clean up tools and such with denatured alcohol. Please refer to the Dye Instruction Book for more information.

**Solvent Dye Thinner - Made by Sculpt Nouveau**

The Dye Thinner is used to dilute or thin the dyes, as the Solvent Dyes are very concentrated. By adding the Dye Thinner to the Dyes, the color will be more transparent. Do not substitute with another thinner. Sculpt Nouveau's Dye Thinner has UV inhibitors, corrosive inhibitors for all metals, and binders that will help maintain the integrity of the dyes. The Dye Thinner “spreads” the dye, when applied to the surface of your material that has dye on it, like nothing else will. If you want to apply only a very slight transparent color or shading we suggest that you add the Solvent Dye to a good clear coating that has UV inhibitors and binders – like Clear Guard, instead of using the Dye Thinner. Other thinners may be used, like Xylene, or Toluene, however they will not flow as easily as our Dye Thinner blend and they will not contain UV inhibitors.

**PROTECTIVE CLEAR SEALERS**

A protective Clear Sealer would be used to protect material from the environment or to set a finish. Iron, steel and aluminum need a protective coating to keep from oxidizing or rusting. A polished surface on bronze, brass, or copper will tarnish without protection. After achieving a patina or color on your material, the protective coating will help it last longer and help to keep it from changing. We suggest applying a clear coating in almost every instance. The best way to apply any brand of clear sealer is to spray it on. Spraying reduces bubbles and ridges formed by the brush, which help to break down the product faster. Small propellant applicators are available, made by Badger or Crown, if you do not have a compressor. Two or three light coats are preferable to one heavy coat, letting each dry before applying the next. No protective sealer will last forever. A regular maintenance program is needed and should be scheduled according to the individual conditions. Wax may be applied over the clear sealer to add even more protection.

**Smart Coat 1K - by Sculpt Nouveau**

Smart Coat 1K is a strong yet non-hazardous, zero VOC, no odor, one part, self hardening, non-yellowing, and non-cracking, top coat. Smart Coat 1K works well over patinas, rust-oxides, as well as all clean polished metals. It may be diluted with water to allow for a penetration of heavy oxides. The finish is beautiful, durable, and hard. Smart Coat 1k is a polymer/resin, yet dilutes and cleans up with water and is eco friendly.

Smart Coat 1K tacks up and hardens quickly to a beautiful hard, thin coating that is fast drying.

Note: Test the metal cleaner, patina, neutralizer and Smart Coat 1K on a scrap piece before you do your project.

**Application Conditions:** Use when the temperature is between 50°F (10°C) to 90°F (32°C) and humidity is below 85% to ensure proper drying. This sealer is self leveling and may be brush applied. You may put the Smart Coat 1K into your own sprayer (like a Crown, or Preval) or an HVLP. No dilution is necessary to spray apply. May be diluted up to 25% with distilled water. Avoid applying in very windy, dusty conditions. Cover surrounding area to protect from spray mist.

**Instructions for Application:**

1. Preparation: For new bare metal - Sand with 220 grit (or below) sandpaper to slightly abrade surface. Clean metals with metal cleaner or Graffiti Remover to remove all dust and oils making sure to remove all polishing compounds.
Wax for hot patinas:
Wax may be applied immediately after finishing the patina, while the metal is still warm. Apply the wax with a brush. Allow the wax to cool, dry, and harden for up to 4 hours. Polish with a terry cloth rag and repeat with a second thin coat of the wax, this time the surface will be cool. After about an hour, buff again. As with the cold patinas you will not want to apply wax immediately to some (cupric-green/blue) patinas as it may change the look. Let the patina cool, then spray on a lacquer. Let this dry six hours then apply the wax as usual.

Maintenance:
Lightly clean the surface every six months or as needed with a non-ionic soap like Ivory Soap. Dry completely and reapply a new layer of wax with a brush. When dry, buff as before. If the wax is maintained regularly there is a good chance the clear sealer will last a long time.

SCULPT NOUVEAU’S METAL OILS

Our Metal Oils come in black, brown, clear, red, blue, green and yellow. They can be used on all metals. They have UV & Corrosive Inhibitors. Apply Metal Oil with a soft cloth or brush, to the clean metal or dry patinaed surface. Rub in well with a clean cloth. Allow 3 to 12 hours to dry. Apply two coats. Metal wax or a clear top coat may be applied over the dried oil after two or three days. For indoor or outdoor use.

METAL COATINGS Made by Sculpt Nouveau

Sculpt Nouveau makes two different formulas of “Metal Coatings”, B & C. Both Metal Coating formulas are made of water based, acrylic and strong, long lasting outdoor binders with real metal powders suspended in them. Different metal powders are used to create different metal coatings – Bronze, Brass, Copper, Iron, Pewter and Silver.

The reason for using the Metal Coatings would be to make something that was not made of metal look as if it were made of metal. For example, a ceramic or plaster object would appear to be made of bronze if the Metal Coating was applied on it. Another application would be to change one metal into a different metal. For example, if you apply the copper Metal Coating over steel, the steel will appear to be copper. Another popular use is to apply the iron coating over iron or steel. This allows you to completely rust the Metal Coating surface without compromising the base metal. Since the coating is an outdoor product, there will be no further disintegration, even outdoors.

The main difference between the Metal Coating “B” and “C”:

Metal Coating “B”: The metal powder remains on the surface while it is wet allowing patina and colors to be applied while the coating is wet. You can patina the Metal Coating after it is dry, but you must first steel wool with ‘0000’. You must be very careful not to go through the coating. The patina will be faint if it is an acid patina.

Metal Coating “C”: Contains more metal powder. Type C comes with a catalyst and hardener. Patina can be applied either while the coating is wet or dry. This is still a water based formula, but comes with a mild catalyst. It is very hard when cured and may be polished with steel wool. Both metal coating formulas adhere very well to most surfaces with the exception of some polyurethane, highly polished or mirror surfaces. Test the coating in a small area on the material. Let it dry for at least 12 hours and then check for adhesion. If your surface is not accepting the coating, use some type of abrasion technique such as sand blasting, wire brush, sanding, etc. Then try the coating again. Applying a primer is not necessary on most materials with the very important exception of GALVANIZED METAL, FERROUS METAL, and or ALUMINUM. With these materials, first apply a strong, well-tested primer like Sculpt Nouveau’s Prime-It. (See primer information on page 5) The purpose of a primer for these materials is twofold. First, the primer separates the Metal Coating, which is non-ferrous, from the ferrous metal, eliminating any possible galvanic reaction. And secondly, the primer will keep any chemical acids used as patinas from reaching the metal.
WAXES

Metal Wax From Sculpt Nouveau

This is the first wax and only wax made for metal surfaces. Sculpt Nouveau's Wax is made with binders, rust, and UV inhibitors. It is ideal for Iron, Steel, and Aluminum. We also make a version for Bronze, Brass, and Copper. The wax is available in clear as well as many colors. Our Solvent Dye may be added for extra color or add your own pigments. We have blended the finest waxes we know of for finishing metal along with the most effective inhibitors, and then we added extra hardeners to create the first wax that is made just for metal. The wax creates a very beautiful, hard protective coating once cured. The wax will be soft in the container.

Instructions:
Apply the wax to a warm or cold surface. Wax should only be used on a cold patina after you have applied at least two coats of either a solvent or water based clear coating. Allow each layer of clear coat to dry fully. Apply the wax to the surface. This wax works well when applied over another clear protective coating or used alone. It also is effective over a rusted surface or patina - although for outdoor rusted metal we recommend applying Sculpt Nouveau Metal Oil, then a clear top coat over the oil, and then apply the wax. Stippling with a brush may be the preferred method of application so as to not create streaking on the surface. Apply a smooth film of wax to the surface. Try not to let the clear wax fill up in the recessed areas as it may turn white. Use a toothbrush or soft brush to remove the excess wax from these areas. When using the colored waxes the build up in the recessed areas is desirable. Allow wax to dry approximately 1 hour. A good rule of thumb is if wax comes off when you rub your finger over the surface it is too early to buff. When ready, buff with a terrycloth type rag. Use a rag to smooth out the ridges. If you are applying the wax to a hot surface, let the surface cool down some. Do not apply the wax to extremely hot surfaces. Do not wait longer than these times to buff in most circumstances as the wax soon dries very hard. To apply multiple layers of wax, apply them very thinly and let each layer harden for a few hours before applying the next. For bronze, brass, copper, or the Metal Coatings with a crusty patina you may choose not to use a Clear coat at all because lacquers and waxes can alter the color. In that case a light spray of a matte fix by Grumbacher, Windsor Newton or our EF lacquer will do.
METAL RUBS

Rubs may be applied over patinas. This is an excellent way to highlight certain areas of your piece. These rubs are available in darkened bronze, darkened brass, darkened copper, and silver.

*General instructions:*
Apply with a soft cloth or gloved fingertips then buff after 12 hours. Apply a sealer after 24 hours of drying time to protect the finish.

IRIDESCENT POWDERS

Sculpt Nouveau’s Iridescent Powders are available in many different colors. These powders may be mixed into all patinas, Solvent Dyes, Dye-Oxides, or clear coatings to add a little iridescent sparkle. If mixed with water and sprayed on, after the patinas or stains, the iridescent sparkle will be more vibrant. Apply a clear sealer to protect the finish.

AGE-IT

Age-It instantly alters the color and texture of new green or blue patinas to make them appear old and weathered. Easy and simple to apply. Covers approx. 300 square feet/gallon. Apply by spray or brush over a new, dry green or blue patina to make the patina color look as if it has been outside for many years.
Application

1. Do not apply heat or take the piece into the sun for 5 to 10 minutes.
2. Apply multiple coats of the Metal Coating (three if the surface is very irregular) letting the coating harden somewhat between applications. Use the Metal Coating B as the first two base coats. This will save money, as it is a less expensive product. The layers may be applied quickly one after the other by drying each with heat. The whole process should be able to be completed in a day.

Techniques to Dry the Metal Coating

Before using any of the below drying techniques, let the Metal Coating sit for 5 to 10 minutes or bubbles will occur.
1. Using the heat from the sun is the preferred technique.
2. Apply the coating, and then heat the surface with a hair dryer.
3. The coating may dry on its own or it may be cured in an oven or kiln at very low temperatures.

Applying a Patina - this will be applied after the final layer of “C”

1. A patina should be sprayed on while the metal coating is wet but may be sprayed on while the Metal Coating is drying or after it has dried. If the Metal Coating is dry, it must be burnished to expose the metal and then apply the patina.
2. A patina containing acid such as Sculpt Nouveau’s Light Green, Tiffany, Blue, or any of the Vista Series will help harden the coating if it is sprayed on while the Coating is drying. When the last or second layer of Metal Coating has cured for at least 1 hour you may burnish the surface with 00 to 0000 steel, bronze, or copper wool, or a fine Scotch Brite.

Polishing the Metal Coating

1. The cured surface may also be polished with a felt wheel (no stitching) and a buffing compound. Do not exceed 1200 RPM’s. (600 to 1200 RPM is best)
2. A Sander Block may be used on a flat surface - 220 grit
3. For aggressive polishing on a rough surface or one with sharp edges - use “Type B” Metal Coating for the first two coats – let dry between coats (or dry quickly with heat) then apply two or more coats of “Type C”.
4. Heat the high points with a hair dryer to harden the metal coating more before polishing.

When applying the metal Coating to iron, steel, or aluminum and the patina that will be applied to the Metal Coating contains acids, (any Traditional or Vista Patinas) a strong primer is necessary. The primer will insure that the acids in the patina will not oxidize the iron, steel, or aluminum, which would ruin the surface.

Good primers for Metal Coatings on iron, steel and aluminum are:

Sculpt Nouveau’s Prime-it - This is a red oxide primer that may be applied to all metal surfaces and also to resin castings and shiny plastics. It is very tough and durable, is water based and has no volatile organic compounds (VOC’s). Now available in rust and white Prime-It.

RUST-OLEUM - Rust-O-Poxy 5300 System water-based epoxy paint activators. Practical are 200-350 sq/ft. VOC less that 250 grams per liter. Used with activator. Designed for use in moderate to severe industrial environments for protection of steel structures. It can also be used on non-ferrous and masonry surfaces. Provides excellent chemical, abrasion and corrosion resistance. Use on clean, abrasive blasted, slightly rusted, or previously painted steel surfaces.

Texture Paint for Metal Coatings - by Sculpt Nouveau

The texture paint is an incredible way to obtain texture on your material before applying the liquid Metal Coating. It is water based and easy to manipulate with any tool you find, much like clay. We recommend this product for indoor or outdoor work. The texture paint seems to bond to any surface so whatever material you are working on, you will be able to add texture to it. As always though, if you are working on ferrous metals you must first apply an additional primer. Sculpt Nouveau’s Prime-It would work best. Always allow each product to dry completely before applying the next.