EZ~Spray® Jr.

Equipment Manual & Usage Guide

Features:

- All New Spray Gun
- Improved Static Mixing Tubes
- Improved Spray Efficiency

SMOOTH-ON

SINCE 1895

www.smooth-on.com

Overview: What Is It & What Can You Do?

EZ~Spray® Jr. is a versatile, convenient and easy-to-use spray system for spraying the following EZ~Spray® materials:

Spray urethane or silicone rubber for making molds of any original model.

EZ~Spray® Urethane Rubber - For making sprayed rubber molds used to cast concrete, plaster, wax, etc. Surface preparation (applying sealing agent + release agent) required.

EZ~Spray® Silicone Rubber - For making fast sprayed rubber molds that have the best release properties for production casting of resins, plaster, etc. *Minimal surface preparation required.*

Spray urethane plastic to make fast, strong mother molds or castings.

EZ~Spray® Urethane Plastic - For spraying over cured rubber molds to make fast support shells / mother molds. Plastic can also be sprayed into rubber molds to make fast, lightweight castings.

StyroCoat® Foam Coating - Coat large areas of foam and other surfaces quickly with a plastic that is impact resistant. Can then be sanded, primed and painted. Great for creating themed environments, theater and movie special effects.

Spray Styrocoat® plastic to coat foam for themeing & special effects.

EZ~Spray® Foams - Make lightweight castings, create special effects or use for lightweight reinforcement.

Spray rigid or flexible foam that is ideal for making fast lightweight castings or special effects.

EZ~Spray® Jr. vs. Commercially Available Spray Machine: *What's The Advantage?*

Lower Cost (In The Short-Run)
No "up front" expense to buy a spray machine ($25,000).

Convenient & Easier to Use
If you have a compressor, you can spray rubber, plastic or foam.

Time & Labor Savings
No Cleaning & No Maintenance.

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Before You Begin . . . *Think!*

Have Necessary Materials On Hand Before You Start - Includes spray rubber, plastic and/or foam, adequate air supply, static mixing tubes, brushes, disposable cleaning rags, acetone (for cleaning) and 3" scraper.

Store Spray Materials At Room Temperature (72°F / 23°C). Work Area Should Be Above 65°F/18°C.

Safety First!

- **Work Space Should Be Well Ventilated.**
- **Personal Protective Equipment** - Anyone in spray area should wear safety equipment, including gloves, eye wear and a NIOSH approved respirator.
- **No Smoking -** Do not smoke in the work area or in the presence of flammable solvents (such as acetone).

Mandatory: Safety glasses, NIOSH approved respirator and rubber gloves.

Section A: Equipment Overview - What You Need

This section will introduce you to the key components of the EZ~Spray® Jr. Spray System and tell you what you need to have on hand before you begin.

1

Required Equipment:

1. Air Compressor:

- **Minimum Compressor Rating:** 5 CFM at 90 PSI
- **At least 5 Peak HP**
- **Minimum Operating Pressure:** 90 - 120 PSI.

Important: Dry air is required to minimize the possibility of moisture contamination of sprayable urethanes. A compressor dryer is recommended.

2

2. The EZ~Spray® Jr. Gun: (*One time purchase* available from your Smooth-On distributor). An easy-to-use spray gun that accommodates Smooth-On's cartridges containing spray rubber, plastic or foam. Gun controls the delivery rate of material through the static mixer and air flow.

3. EZ~Spray® Material Cartridges

3

Rubber, Plastic or Foam - Part A and Part B packed in cartridges. Squeezing gun trigger pumps equal amounts of material through manifold into static mixing tube.

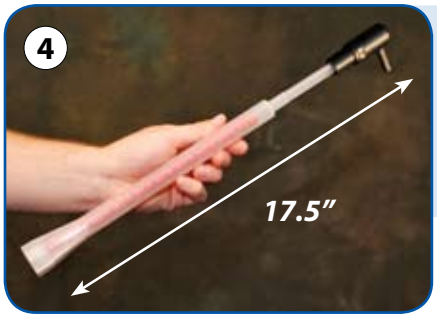
4. Static Mixing Tubes - Two Types

4

Small Mixing Tube & Nozzle
Used with:

- EZ~Spray® 45 Urethane
- EZ~Spray® Styrocoat®
- EZ~Spray® Plastic
- EZ~Spray® Rigid Foam
- EZ~Spray® Flexfoam

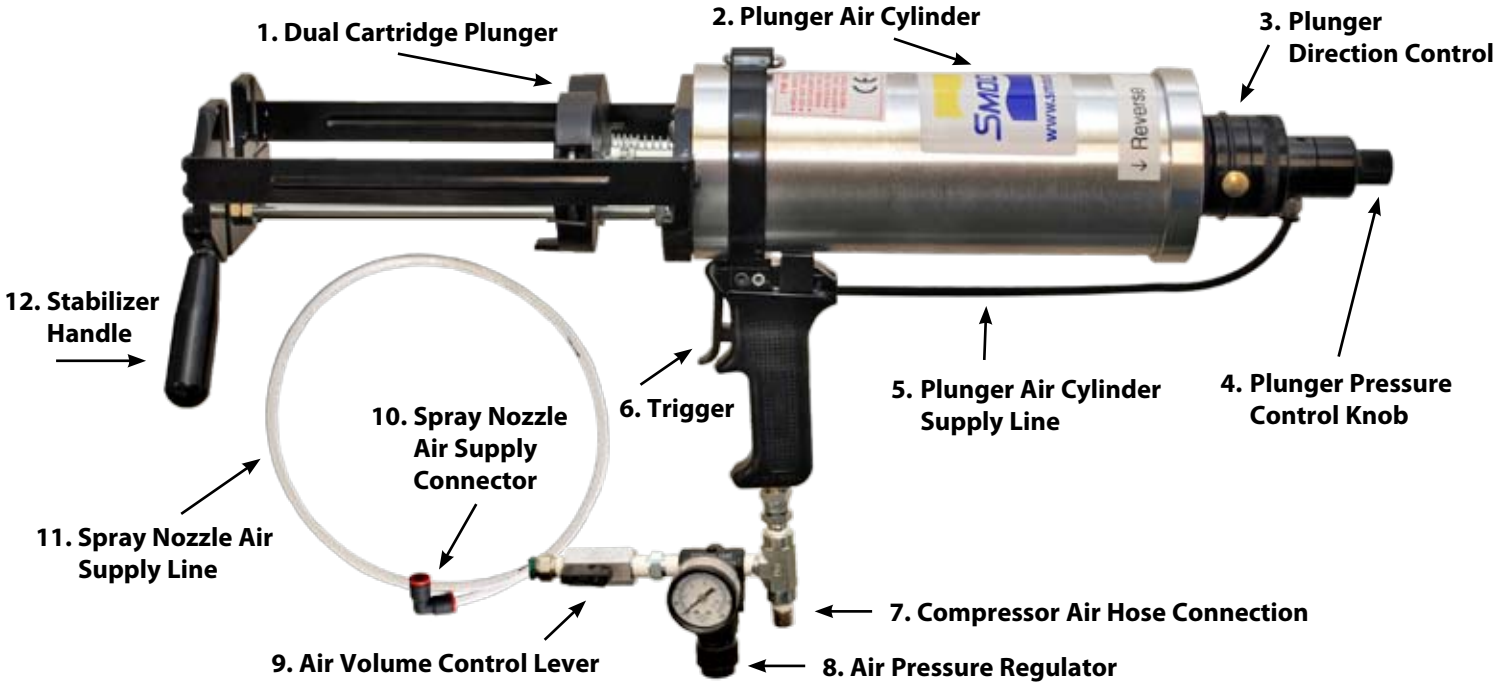
4



Large Mixing Tube & Nozzle
Used with:

- EZ~Spray® Silicone 20
- EZ~Spray® Silicone 35

Section B: Getting To Know The EZ~Spray® Jr. Gun



1. **Dual Cartridge Plunger** - Forces A+B material from cartridge through static mixing tube.
2. **Plunger Air Cylinder -** Pressurized air cylinder that initiates movement of plunger.
3. **Plunger Direction Control** - Withdraws cartridge plunger from empty cartridge when pressed simultaneously with trigger.
4. **Plunger Pressure Control Knob** - Controls volume of material dispensed by increasing or decreasing plunger air cylinder pressure.
5. **Plunger Air Cylinder Supply Line -** Delivers air to plunger air cylinder.
6. **Trigger** - Controls movement of cartridge plunger.
7. **Compressor Air Hose Connection** - Connects to your air compressor.
8. **Air Pressure Regulator** - Regulates the pressure from the air compressor into the gun.
9. **Air Volume Control Lever** - Regulates the amount of air delivered to the spray nozzle.
10. **Spray Nozzle Air Supply Connector -** Attaches to end of static mixing tube, combines air with rubber or plastic and sprays material.
11. **Spray Nozzle Air Supply Line** - Routes air from compressor quick connect to end of static mixing tube.
12. **Stabilizer Handle -** Helps hold the gun steady during use.

Attaching Air Pressure Regulator

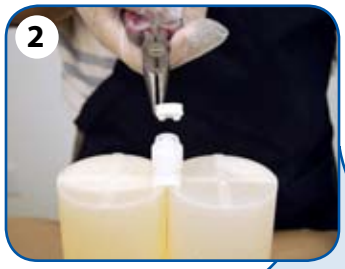
The air pressure regulator attaches to the gun at the base of the handle (see right).

Connecting Gun to Air Compressor

An air hose quick connect (included) is attached to the base of the regulator (see above). An air supply is connected to the gun.

Section C: Preparing To Spray . . . Step By Step

Preparing An EZ~Spray® Urethane Rubber, Plastic or Foam Material Cartridge



1. Place material cartridge on a level surface and remove black retaining ring by turning counter-clockwise. This exposes the white manifold plug that prevents material leaks.

2. Remove the manifold plug using pliers. **Spraying Plastic or Foam? See Step 2A below**

3. Place a **small** static mixing tube over the open manifold. Turn black retaining ring clockwise and firmly hand tighten.

4. Fit cartridge securely into gun.

5. Attach air supply connector to the spray nozzle at the end of the static mixing tube.

Spraying EZ~Spray® Plastic, Styrocoat® or Foam? Flow Restrictor REQUIRED

A flow restrictor is a small black plastic component (see picture at left) that fits over the open end of a material cartridge. The restrictor is required to prevent cross-contamination of Parts A & B in low viscosity spray materials like plastic or foam. The restrictor also allows you to stop spraying, saving material in a partially used cartridge for another time.

2A. *Installing Flow Restrictor*: Place restrictor over the open manifold holes prior to attaching **small** static mixing tube. **Return to Step 3 above.**

Preparing An EZ~Spray® Silicone Material Cartridge

1. Place material cartridge on a level surface and remove black retaining ring by turning counter-clockwise. This exposes the white manifold plug that prevents material leaks.

2. Remove the manifold plug using pliers.

3. Place a **large** static mixing tube over the open manifold. Turn mixing tube clockwise and firmly hand tighten.

4. Fit cartridge securely into gun.

5. Attach air supply connector to the spray nozzle at the end of the static mixing tube.

Proceed to:

D: Spraying Urethane Rubber	Page 4	**H: Spraying Styrocoat® Urethane Coating**	Page 15
E: Spraying Support Shell - Urethane Mold	Page 6	**I: Spraying Foams**	Page 17
F: Spraying Silicone Rubber	Page 9	**J: Disposal Of Empty Cartridge**	Page 20
G: Spraying Support Shell - Silicone Mold	Page 12		

Section D: Spraying EZ~Spray® Urethane Rubber

This section gives you step-by-step instructions for spraying EZ~Spray® Urethane rubber. Before proceeding, make sure that you have read the following parts of this manual: **Section A**: Equipment Overview, **Section B**: Getting To Know The Spray Gun and **Section C**: Preparing To Spray. Also, read the EZ~Spray® 45 Urethane technical bulletin.

Safety First

The spray area should be well ventilated. Anyone in the spray area should wear personal protective equipment including the following:

The original model for this demonstration is a highly detailed relief made from gypsum.

Step 1. Seal & Release Model - The EZ~Spray® 45 technical bulletin will tell you that urethane rubber will bond to many surfaces. To prevent sticking, a sealing agent followed by a release agent must be applied to the model's surface before applying rubber. For this model, SuperSeal® sealing agent followed by Ease Release® 200 is applied.

- **Follow directions for inserting a spray cartridge into the EZ~Spray® Jr. Gun found on page 3.**

Step 2. Turn Air Volume Control Lever to the OFF position (see picture at right), pulled fully backward into an upright position.

Step 3. Adjust Material Output - Aim spray nozzle down at inside wall of waste bucket and pull trigger to check product output. Material flow from nozzle should be "medium." If the material flow from nozzle is too high or not high enough, **Step 3A. Adjust the *"Plunger Pressure Control Knob"*** to decrease or increase flow (turn right to increase, left to decrease). Make sure you do not stop dispensing material.

Step 4. Adjust Air Volume Control Lever - Push air volume control lever forward slowly until desired spray pattern is attained. Too much air will result in atomization, which is a waste of material. **4A.** Material on bucket wall should be uniform in color. Without taking your finger off the trigger, go from bucket to model surface immediately.

Section D (Continued): Spraying EZ~Spray® Urethane

Step 5. Applying Mold Rubber To Model Surface - Begin by spraying rubber onto model surface at the bottom or base of the model and move upward. Apply rubber to underside and undercuts first.

- **Do Not Stop Spraying** until the material cartridge is empty or your project is finished.

Other Application Tips

- **Do not over spray in one position.** Rubber will pool and drip downward. This may also entrap air which will be reflected in the finished mold.
- **Apply an initial thin layer -** the initial layer should be thin so that air is not entrapped.
- **Brush Material -** Have a helping pair of hands ready to brush material into detail and undercuts. Make sure breathing protection is worn.
- **Move spray gun** to proper angles necessary to "air-deliver" rubber into surface detail and deep undercuts.
- **Apply additional layers.** After model is completely covered with a uniform 1st layer, apply subsequent layers to give the mold strength and dimensional stability. Ultimate mold thickness: Minimum 3/8" (1 cm).
- **Adjust output as needed while spraying.** While spraying, you can adjust the volume of rubber by varying the control knob on back of the gun.

Step 6. Use a brush to work drips back into the mold. You can use a gloved hand or scraper to fill holes.

Step 7. Scrape excess off from model perimeter and leave a clean edge. This will help align the sprayed support shell with the rubber mold.

Step 8. Let Cure 16 Hours At Room Temperature - After the final layer is applied (72°F / 23°C).

- **Minimum finished mold thickness:** 3/8" (0.95 cm).

How Much Rubber Was Used To Make This Mold?
3 Cartridges of EZ~Spray® 45 mold rubber.
About 10.75 lbs. / 4.87 kgs.

Section E: Spraying EZ~Spray® Plastic

This section gives you step-by-step instructions for spraying EZ~Spray® Plastic to make a support shell (mother mold) over urethane rubber. Before proceeding, make sure that you have read the following parts of this manual: **Section A**: Equipment Overview, **Section B:** Getting To Know The Spray Gun and **Section C:** Preparing To Spray.

EZ~Spray® Plastic has been re-formulated to be more impact resistant and shrink less than the original formulation. Read the EZ~Spray® Plastic technical bulletin before proceeding.

Safety First

The spray area should be well ventilated. Anyone in the spray area should wear personal protective equipment including the following:

Step 1. Apply Ease Release® 200 to rubber mold surface and all surrounding surfaces that may come in contact with spray plastic. Use only as directed.

Step 2. Follow directions for inserting a spray plastic cartridge into the EZ~Spray® Jr. Gun found on page 3**. Don't forget to insert flow restrictor before attaching static mixing tube.**

Step 3. Turn Air Volume Control Lever to the OFF position (see picture at right), pulled fully backward into an upright position.

Step 4. Adjust Material Output - Aim spray nozzle down at inside wall of waste bucket and pull trigger to check product output. Material flow from nozzle should be "medium." If the material flow from nozzle is too high or not high enough, **Step 4A. Adjust the *"Plunger Pressure Control Knob"*** to decrease or increase flow (turn right to increase, left to decrease).

Step 5. Adjust Air Volume Control Lever - Push air volume control lever forward slowly until desired spray pattern is attained. Too much air will result in atomization, which is a waste of material. **5A.** Material on bucket wall should be uniform in color. Without taking your finger off the trigger, go from bucket to rubber surface immediately.

- **Do Not Add Too Much Air. If you see a vapor cloud forming, decrease air pressure by adjusting the Air Volume Control lever.**

Section E (Continued): Spraying EZ~Spray® Plastic

Step 6. Spraying Plastic Onto Rubber Mold Surface - Begin spraying plastic onto mold surface at the bottom or base and move upward.

Step 7. Do Not Stop Spraying until the material cartridge is empty or your project is finished.

- **Move spray gun back and forth in a "sweeping" motion.** Apply plastic in thin layers. Do not over spray in one position.

Step 8. Move spray gun to proper angles necessary to "air-deliver" plastic into deep undercuts.

- **Adjust output as needed while spraying.** While spraying, you can adjust the volume of the plastic as necessary by varying plunger pressure control knob at the back of the gun.

Step 9. If Necessary, Add Support Armature - Once support the shell has attained adequate thickness, a support armature (wood, electrical conduit, etc.) can be quickly embedded in plastic. For this mold, two pieces of wood are embedded to provide level support during casting. For more information about mold making techniques, contact Smooth-On at (610) 252-5800.

- **After applying final layer,** check for holes and missed areas.
- **Minimum finished shell thickness: 1/4" (0.64 cm) of plastic**.

Step 10. Let plastic cure for 1 hour at room temperature (72°F / 23°C).

Section E (Continued): Spraying EZ~Spray® Plastic

Steps 11 & 12. Demold - An adequate coating of mold release ensured easy separation of the plastic shell from the rubber mold. Because the model was properly sealed and released, the cured rubber mold is easily removed from the model surface. The rubber mold reflects perfect detail captured from the original model.

Step 13. The support shell is supported by the encapsulated wood strips to provide a stable, level surface for casting. The rubber mold is aligned and fits perfectly into the shell.

Quantity of Spray Plastic Used To Make This Support Shell:
2 Cartridges - About 7.1 lbs. / 3.2 kgs.

Casting Into The Mold Using EZ~Spray® Plastic

- Because this is a urethane mold, Ease Release® 200 release agent is applied as directed into the mold cavity.

Step 14. Because we want to paint the casting following demold, a neutral auto body primer is sprayed into the mold cavity. The primer will bond to the spray plastic, providing a suitable base for painting.

- A cartridge of EZ~Spray® Plastic is prepared and inserted into the spray gun as directed on page 3**.**

Steps 15 & 16. The same sweeping application technique is used, and in a matter of minutes, the spray casting is finished. It is allowed to cure one hour before being removed from the rubber mold.

Steps 17 & 18. A faux stone finish spray paint is applied to give the finished casting a textured look. The finished casting reflects perfect detail captured from the original model by the spray rubber.

The finished casting is less than 1/8 the weight of the original model.

***Quantity of Spray Plastic Used To Make This* Casting:**
1 Cartridge - About 3.6 lbs. / 1.63 kgs.

Section F: Spraying EZ~Spray® Silicone Rubber

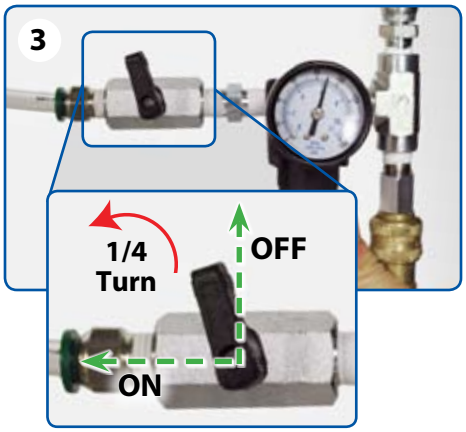
This section gives you step-by-step instructions for spraying EZ~Spray® Silicone rubber to make a fast rubber mold. Before proceeding, make sure that you have read the following parts of this manual: **Section A**: Equipment Overview, **Section B:** Getting To Know The Spray Gun and **Section C**: Preparing To Spray. Also, read the EZ~Spray® Silicone technical bulletin.

EZ~Spray® Silicone is a platinum silicone that offers advantages over EZ~Spray® 45 urethane mold rubber: **1.** Silicone rubber cures quickly: you can have a cured mold ready for casting in a few hours vs. overnight with other mold rubbers. **2.** Because this is a silicone, it does not stick to many surfaces - surface preparation is minimal or not necessary. Also, a release agent is not necessary when casting into cured rubber molds. **3.** Cured rubber is soft, strong and stretchy. It will stand up to production casting of most materials, including low-temperature melt metal alloys.

Disadvantages: **1.** Platinum silicones are expensive vs. other mold rubbers. **2.** Platinum silicones are more easily inhibited by contaminates on a model surface. For example, this silicone will not cure against modeling clays containing sulfur. Read the EZ~Spray® Silicone technical bulletin before proceeding.

Safety First

The spray area should be well ventilated. Anyone in the spray area should wear personal protective equipment including the following:



- **Important: Use vinyl gloves only. Do not use latex gloves with platinum silicones, as cure inhibition may occur.**

Step 1. The original model used for this demonstration is made of plaster. **Apply Release Agent?** Silicone does not stick to most surfaces and is not necessary. However silicone can mechanically lock on to many surfaces like dry plasters, stone, concrete, etc. Applying Ease Release® 200 will aid in releasing the rubber from these surfaces. Read the product technical bulletin for more information.

Step 2. Unique Static Mixing Tube & Spray Nozzle Required - EZ~Spray® Silicone is thick (high viscosity). A larger static mixing tube is required to successfully spray this silicone. Make sure you have the correct static mixing tube, then follow directions for inserting a spray silicone cartridge into the EZ~Spray® Jr. Gun found on page 3**.**

- **Do not use the flow restrictor with this static mixing tube.**

Step 3. Turn Air Volume Control Lever 1/4 turn toward the ON position until there is some air coming out of the spray nozzle (see picture at left).

Section F (Continued): Spraying EZ~Spray® Silicone

Step 4. Material Output - Aim spray nozzle down at inside wall of waste bucket and pull trigger to check product output. Material flow from nozzle should be "medium." If the material flow from nozzle is too high or not high enough, **Step 4A. Adjust the *"Plunger Pressure Control Knob"*** to decrease or increase flow (turn right to increase, left to decrease).

Step 5. Adjust Air Volume Control Lever - Push air volume control lever forward slowly until desired spray pattern is attained. Too much air will result in atomization, which is a waste of material. **5A.** Material on bucket wall should be uniform in color. Without taking your finger off the trigger, go from bucket to model surface immediately.

- **Do Not Add Too Much Air**

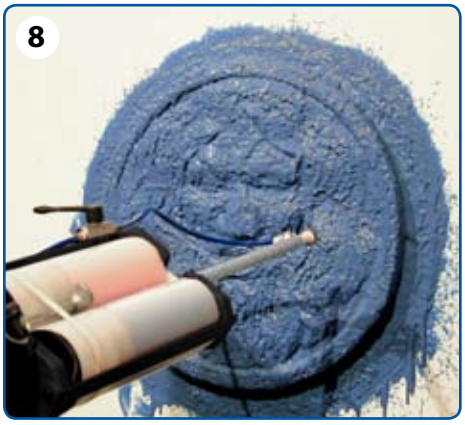
Step 6. Applying Mold Rubber To Model Surface - Begin spraying rubber onto model surface using a sweeping, back and forth motion.

Step 6A. Brush Material - Have a helping pair of hands ready to brush material into detail and undercuts. Make sure breathing protection is worn by anyone in the spray area.

- **Do Not Stop Spraying** until the material cartridge is empty or your project is finished.

Other Application Tips

- **Apply an initial thin layer -** the initial layer should be thin so that air is not entrapped.
- **Do not over spray in one position.** This will cause rubber to pool and drip downward. This will also entrap air, which will be reflected in the finished mold and subsequent castings.
- **Move spray gun** to proper angles necessary to "air-deliver" rubber into surface detail and deep undercuts.



Section F (Continued): Spraying EZ~Spray® Silicone

Step 7. Adjust output as needed while spraying. While spraying, you can adjust the volume of rubber as necessary by varying plunger pressure control knob at the back of the gun.

Step 8. Apply additional layers. After model is completely covered with a thin and uniform first layer, apply three additional layers to give the mold strength and dimensional stability.

- **After applying final layer,** check for holes and missed areas.

Step 9. Let silicone cure for 1 hour at room temperature (72°F / 23°C).

- **Minimum finished mold thickness:** 3/8" (0.95 cm) of rubber.

***Quantity of Material Used:* Just over 1.5 cartridges of EZ~Spray® Silicone - About 6 lbs. / 2.72 kgs.**

Step 10. Trim excess rubber from around perimeter. This will help with registration of the support shell.

- ***Proceed To "Section G: Spraying A Plastic Support Shell" For This Silicone Mold.***

Section G: Spraying EZ~Spray® Plastic Over Silicone

This section gives you step-by-step instructions for spraying EZ~Spray® Plastic to make a support shell (mother mold) over silicone rubber. Before proceeding, make sure that you have read the following parts of this manual: **Section A**: Equipment Overview, **Section B:** Getting To Know The Spray Gun and **Section C:** Preparing To Spray.

EZ~Spray® Plastic has been re-formulated to be more impact resistant and shrink less than the original formulation. Read the EZ~Spray® Plastic technical bulletin before proceeding.

Safety First

The spray area should be well ventilated. Anyone in the spray area should wear personal protective equipment including the following:

Step 1. Ease Release® 200 is applied to all surfaces that may come in contact with spray plastic. Use only as directed.

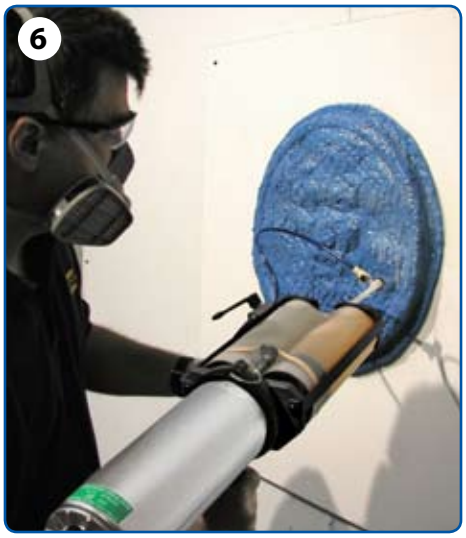
Step 2. Follow directions for inserting a spray plastic cartridge into the EZ~Spray® Jr. Gun found on page 3**. Don't forget to insert flow restrictor before attaching static mixing tube.**

Step 3. Air Volume Control Lever is off - Make sure air volume control lever is in the OFF position (see picture at right), pulled fully backward into an upright position.

Step 4. Material Output - Aim spray nozzle down at inside wall of waste bucket and pull trigger to check product output. Material flow from nozzle should be "medium." If the material flow from nozzle is too high or not high enough, **Step 4A. Adjust the *"Plunger Pressure Control Knob"*** to decrease or increase flow (turn right to increase, left to decrease). Make sure you keep spraying while adjusting pressure.

Step 5. Adjust Air Volume Control Lever - Push air volume control lever forward slowly until desired spray pattern is attained. Too much air will result in atomization, which is a waste of material. **5A.** Material on bucket wall should be uniform in color. Without taking your finger off the trigger, go from bucket to rubber surface immediately.

- **Do Not Add Too Much Air. If you see a vapor cloud forming, decrease air pressure by adjusting the Air Volume Control lever.**



Step 6. Spraying Plastic Onto Rubber Mold Surface - Begin spraying plastic onto mold surface at the bottom or base and move upward.

- **Do Not Stop Spraying** until the material cartridge is empty or your project is finished.

Other Application Tips

- **Move spray gun back and forth in a "sweeping" motion.** Apply plastic in thin layers. Do not over spray in one position.
- **Move spray gun** to proper angles necessary to "air-deliver" plastic into deep undercuts.
- **Adjust output as needed while spraying.** While spraying, you can adjust the volume of the plastic as necessary by varying plunger pressure control knob at the back of the gun.

Step 7. If Necessary, Add Support Armature - Once support shell has attained adequate thickness, a support armature (wood, electrical conduit, etc.) can be quickly embedded in plastic. For this mold, two pieces of 2x4 are embedded to provide level support during casting. For more information about mold making techniques, contact Smooth-On at (610) 252-5800.

- **After applying final layer,** check for holes and missed areas.
- **Minimum finished shell thickness:** 1/4" (0.64 cm) of plastic.
- **Let cure for 1 hour** at room temperature (72°F / 23°C).

Step 8. Demold - Because this is a silicone rubber mold, the support shell does not stick to it and the rubber easily separates from the model surface.

Quantity of Spray Plastic Used To Make This Support Shell:
1 Cartridge - About 3.5 lbs. / 1.58 kgs.

Section G (Continued): Spraying Plastic Over Silicone

Step 9. Demold (continued) - The rubber mold reflects perfect detail captured from the original model.

Casting Into The Mold Using EZ~Spray® Plastic

Step 10. After excess plastic is trimmed away from the support shell perimeter using a grinder, mold release is applied to the shell to release any spray plastic that might come in contact with it.

Step 11. The rubber mold is aligned and fits perfectly into the shell for casting.

Step 12. Because we want to paint the casting following demold, a neutral auto body primer is sprayed into the mold cavity. The primer will bond to the spray plastic, providing a suitable base for painting.

Step 13. A cartridge of spray plastic is prepared and inserted into the spray gun as directed on page 3. **Don't forget to insert flow restrictor before attaching static mixing tube.** The same sweeping application technique is used, and in a matter of minutes, the spray casting is finished. It is allowed to cure one hour before being removed from the rubber mold.

Step 14. Demold Casting - The finished casting reflects perfect detail captured from the original model by the spray rubber. The casting is ready for painting.

The finished casting is less than 1/8 the weight of the original model.

Quantity of Spray Plastic Used To Make This Casting:
0.60 of 1 Cartridge - About 2.25 lbs. / 1.02 kgs.

Section H: Spraying StyroCoat® Plastic

This section gives you step-by-step instructions for coating foam using EZ~Spray® Styrocoat® Plastic. Before proceeding, make sure that you have read the following parts of this manual: **Section A**: Equipment Overview, **Section B:** Getting To Know The Spray Gun and **Section C:** Preparing To Spray.

EZ~Spray® StyroCoat® Plastic is a urethane plastic made for coating foam models used for creating special effects, themed environments and other applications. It gels quickly and holds a vertical surface, curing with an impact resistant, relatively smooth surface that can be sanded, primed and painted. Read the StyroCoat® Plastic technical bulletin before proceeding.

Safety First

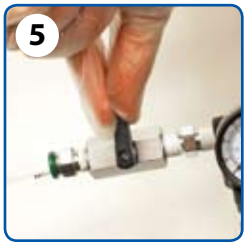
The spray area should be well ventilated. Anyone in the spray area should wear personal protective equipment including the following:

Step 1. StyroCoat® urethane plastic will stick to almost any surface. Cover all areas in the spray area that might come in contact with the spray plastic.

Step 2. Follow directions for inserting a StyroCoat® cartridge into the EZ~Spray® Jr. Gun found on page 3**. Don't forget to insert flow restrictor before attaching static mixing tube.**

Step 3. Air Volume Control Lever is off - Make sure air volume control lever is in the OFF position (see picture at left), pulled fully backward into an upright position.

Step 4. Material Output - Aim spray nozzle down at inside wall of waste bucket and pull trigger to check product output. Material flow from nozzle should be "medium." If the material flow from nozzle is too high or not high enough, **Step 4A. Adjust the *"Plunger Pressure Control Knob"*** to decrease or increase flow (turn right to increase, left to decrease). Make sure you keep spraying while adjusting pressure.



Step 5. Adjust Air Volume Control Lever - Push **air volume control lever** forward slowly until desired spray pattern is attained. Too much air will result in atomization, which is a waste of material. **5A.** Material on bucket wall should be uniform in color. Without taking your finger off the trigger, go from bucket to rubber surface immediately.

- **Do Not Add Too Much Air - If you see a vapor cloud forming, decrease air pressure by adjusting the Air Volume Control lever.**

Step 6. Spraying Plastic Onto Foam Model - Begin spraying plastic onto model surface at the bottom or base and move upward.

- **Do Not Stop Spraying** until the material cartridge is empty or your project is finished.

Other Application Tips

- **Move spray gun back and forth in a sweeping motion.** Apply plastic in thin layers. Do not over spray in one position.
- **Move spray gun** to proper angles necessary to "air-deliver" plastic into deep undercuts.
- **Adjust output as needed while spraying.** While spraying, you can adjust the volume of the plastic as necessary by varying plunger pressure control knob at the back of the gun.
- **After applying final layer,** check for holes and missed areas.
- **Minimum finished coating thickness:** 1/4" (0.64 cm) of plastic.

Step 7. Let cure for 1 hour at room temperature (72°F / 23°C) before sanding, priming and painting.

- **This model measured 4.5' tall, 2.25 sq. ft. at the top and 3.75 sq. ft. at the base.**

Quantity of StyroCoat® Used To Coat This Model:
8.25 Cartridges - About 31 lbs. / 14 kgs.

Model used for this demonstration is part of the stage set for Elton John's latest Broadway play, "Dracula." Courtesy ***Spoon Group*** *in Rahway, New Jersey.*

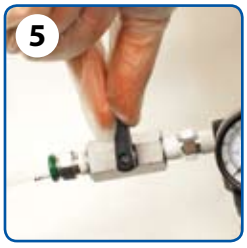
Section I: Spraying EZ~Spray® Foam

This section gives you step-by-step instructions for spraying EZ~Spray® Foam (Rigid & FlexFoam) into a rubber mold. Before proceeding, make sure that you have read the following parts of this manual: **Section A**: Equipment Overview, **Section B:** Getting To Know The Spray Gun and **Section C:** Preparing To Spray.

EZ~Spray® Rigid Foam is an expanding urethane foam (8 lb. density) made for creating lightweight foam castings, special effects, themed environments and other applications. It gels quickly and holds a vertical surface, curing with an impact resistant, relatively smooth surface that can be sanded, primed and painted. Read the EZ~Spray® Rigid Foam technical bulletin before proceeding.

Safety First

The spray area should be well ventilated. Anyone in the spray area should wear personal protective equipment including the following:



Step 1. For this demonstration, we will spray foam into a silicone rubber mold. **Apply Release Agent?** If spraying into a urethane rubber mold, use only *Ease Release 2831* to release cured foam from the mold. **Do Not Use Silicone-Based Release Agents.** Also, cover all areas in the spray area that might come in contact with the spray foam.

Step 2. Follow directions for inserting a spray foam cartridge into the EZ~Spray® Jr. Gun found on page 3**. Don't forget to insert flow restrictor before attaching static mixing tube.**

Step 3. Air Volume Control Lever is off - Make sure air volume control lever is in the OFF position (see picture at left), pulled fully backward into an upright position.

Step 4. Material Output - Aim spray nozzle down at inside wall of waste bucket and pull trigger to check product output. Material flow from nozzle should be "medium." If the material flow from nozzle is too high or not high enough, **Step 4A. Adjust the *"Plunger Pressure Control Knob"*** to decrease or increase flow (turn right to increase, left to decrease). Make sure you keep spraying while adjusting pressure.

Step 5. Adjust Air Volume Control Lever - Push air volume control lever forward slowly until desired spray pattern is attained. Too much air will result in atomization, which is a waste of material. **5A.** Material on bucket wall should be uniform in color. Without taking your finger off the trigger, go from bucket to rubber surface immediately.

- **Do Not Add Too Much Air. If you see a vapor cloud forming, decrease air pressure by adjusting the Air Volume Control lever.**

Step 6. Spraying Foam Into a Rubber Mold- Begin spraying foam onto mold surface at the bottom or base and move upward. Foam expands and cures quickly.

- **Do Not Stop Spraying** until the material cartridge is empty or your project is finished.

Other Application Tips

- **Move spray gun back and forth in a sweeping motion.** Apply foam in thin layers. Do not over spray in one position.
- **Move spray gun** to proper angles necessary to "air-deliver" foam into deep undercuts.
- **Adjust output as needed while spraying.** While spraying, you can adjust the volume of the foam as necessary by varying plunger pressure control knob at the back of the gun.
- **After applying final layer,** check for holes and missed areas.
- **Minimum finished casting thickness:** 1/4" - 1/2" (0.63 cm - 1 cm) of foam.

Step 7. Let cure for 1 hour at room temperature (72°F / 23°C) before demolding. You can then sand, prime and paint.

Step 8. Cured casting is primed with auto body primer and painted with acrylic paints for a realistic finish.

Quantity of Foam Used To Make Casting: **0.70 of 1 cartridge.**
Weight of finished casting: About 2.5 lbs. / 1.13 kgs.

Section I (Continued): Spraying Flexible Foam

EZ~Spray® FlexFoam is an expanding urethane foam (7 lb. density) that can be used for a variety of special effects and industrial applications. It gels quickly and holds a vertical surface, curing to a strong yet flexible foam with a good surface skin. Read the EZ~Spray® FlexFoam technical bulletin before proceeding.

- **Follow Steps 1-5 of Section I: Spraying EZ~Spray® Foam** to prepare EZ~Spray® Jr. Gun and FlexFoam cartridge

Step 6. Spraying FlexFoam Into a Rubber Mold - Begin spraying foam onto mold surface at the bottom or base and move upward. Foam expands and cures quickly.

- **Do Not Stop Spraying** until the material cartridge is empty or your project is finished.

Other Application Tips

- **Move spray gun back and forth in a sweeping motion.** Apply foam in thin layers. Do not over spray in one position.
- **Move spray gun** to proper angles necessary to "air-deliver" foam into deep undercuts.
- **Adjust output as needed while spraying.** While spraying, you can adjust the volume of the foam as necessary by varying plunger pressure control knob at the back of the gun.
- **After applying final layer,** check for holes and missed areas.
- **Minimum finished casting thickness:** 1/4" - 1/2" (0.63 cm - 1 cm) of foam.

Step 7. Let cure for 1 hour at room temperature (72°F / 23°C) before demolding. Cured casting reflects perfect detail captured by the mold.

Step 8. Assembled pieces are painted with various layers to create realism.

Quantity of Foam Used To Make Casting: **1 cartridge.**
Weight of finished casting: About 3.75 lbs. / 1.7 kgs.

Section J: Disassembly & Disposal Of Empty Cartridge

This section provides instruction on removing an empty material cartridge from the EZ~Spray® Jr. Gun. This process (shown below) is identical for both the small and large static mixing tubes.

Step 1. Once a material cartridge has been fully dispensed, it can be removed from the EZ~Spray® Jr. Gun and discarded. The first step is to disconnect the Spray Nozzle Air Supply Connector from the static mixing tube. Begin by positioning your forefinger and middle finger under the red ring that locks the connector to the spray nozzle.

Step 2. Using your thumb for leverage, pull back the red ring until it is flush with the Air Supply Connector. This will unlock the connector from the spray nozzle.

Step 3. Without releasing the red ring, pull the Air Supply Connector up and away from the spray nozzle.

Step 4. To remove the cartridge from the gun, the dual cartridge plunger must first be fully retracted. Set the Plunger Direction Control to the "Reverse" position. Press and hold the trigger until the plungers are fully retracted.

Step 5. Lift the empty material cartridge out of the gun. The cartridge, static mixing tube and spray nozzle are fully disposable and can be discarded.

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