



## **RHUV SPECIAL EFFECT PRODUCTS & SPECIFICATIONS**

### **Introduction to UV cured Special Effect Products and more:**

Special Effect Products are UV curable coatings for an array of enhanced creative finishes that provides thick film deposit (3D), deep high gloss, textures, abrasives, wrinkle, coral, bubble, matte, fine line holograph, glitter and micro embossing offering an incredible result in graphic applications that are 100% screen printed. A stunning visual enhancement can be achieved when screen printing Special Effect Products and can be arranged in a single application or multiples.

Special Effect Products will enable any printing company to win business and increase profits due to added-value finishing, be it screened, offset or digital prints. Virtually every company today is exploring ingenious ways to enhance their products to add or create value-added additions in the printing process. These products are not the me too kind, they are truly unique, each one have distinct properties for the screen printing and many applications will 'knock-your-socks-off'.

The end results have such a visual impact that nearly any commercial graphic application can be enlivened to provide your company with compelling and genuine differentiation from your competition! Application versatility is only limited to ones imagination be it packaging, general merchandise, electronic applications and numerous other printing applications.

All Special Effect Products are environmentally friendly, based on ISO9001 quality system and 5S philosophy (Lean Manufacturing Implementation). Each product meets stringent international quality standards and is well suited for all areas of the world.

ISO 9001 quality system, with three (3) inspection standards;

- ⚠ America ASTM-F963-95A
- ⚠ Europe EN-71 PART 3
- ⚠ Japan ST MARK PART 3
- ⚠ RoHS

All Special Effect Products are formulated to yield a durable yet flexible film that measures up to 3E industry standards, low Energy consumption, Environmentally friendly and highly Efficient.

**PRODUCT PACKAGE:** 1 KG / 5 KGS Containers

“When printing become product profits increase”













# RHUV-ICY SNOW

## SUBSTRATES

Formulated for general paper, card, PVC, PC and other materials.

## FINISHED PRODUCTS / END USES

High grade packaging for wine and cigarette, calendar and gift-wrap etc.

## PRODUCT INFORMATION

Matte, ice effect on finish, dazzling and light glistening.

CHARACTERISTICS	Glossiness	Water Resistance	Alkali Resistance	Solvent Resistance	Flexibility	Adhesion
DESCRIPTION RHUV-Icy Snow	7-10	Grade 5	Grade 4	Grade 3	Excellent	Excellent

TECHNICAL PARAMETERS	Appearance	Viscosity @ 77°F (25°C)	Solidification/Curing Speed	Solidification/Curing Power	Resin
DESCRIPTION RHUV-Icy Snow	Milky white	160-180p	65-98 ft/min (20-30m/min)	≥150mj/cm <sup>2</sup>	99.5%

## APPLICATION INFORMATION

**MESH** Monofilament polyester mesh count 305-380 (120-152T metric) medium thread diameter with a good screen tension of at least 24-26 N/cm<sup>2</sup>  
Mesh selection determines film deposit, gloss and speed of creating an Icy Snow effect.

**SQUEEGEE** 70-75 durometer good quality polyurethane solvent resistance blade

### COVERAGE

Approx. 430-486 square ft/kg (40-45m<sup>2</sup>/kg) with mesh count 355 (140T metric)

### CURE

By Ultra Violet curing unit, best with 2 or 3 high/medium voltage mercury-vapor lamps at least 5Kw to ensure sufficient UV power for curing. One lamp for creating ice and one/two for curing.

### ADDITIVES

Use UV Reducer (#1 or #2) to reduce viscosity

### CLEAN UP

Use organic solvents to clean the screen and wait until it has evaporated before printing

### NOTE:

- 1 Icy Snow is usually printed on color substrates. The appearance and adhesion ability will affect the size and equality of ice, while the chroma is a factor in determining the ice effect.
- 2 Ice Snow effect can be controlled and adjusted by the UV curing unit conveyor speed.
- 3 Icy Snow has recommended curing requirement of 2 or 3 high/medium voltage mercury-vapor lamps are need for curing. One lamp for creating ice and the one/two are for curing.
- 4 Cured Icy Snow products are low odor, soft, good adhesion and fold resistance. It is suitable for high grade packaging printing.
5. See User Information for more details.

RH Solutions stands behind the quality of this product. RH Solutions cannot, however, guarantee the finished results because RH Solutions exercises no control over individual operating conditions and production procedures. While technical information and advice on the use of this product is provided in good faith, the User bears sole responsibility for selecting the appropriate product for their end-use requirements. User are also responsible for testing to determine that our product will perform as expected during the printed item's entire life-cycle from printing, post-print processing, and shipment to end-use. This product has been specially formulated for screen printing, and it has not been tested for application by another method. Any liability associated with the use of this product is limited to the value of the product purchased from RH Solutions.



## RHUV-WRINKLE

**SUBSTRATES** Formulated golden and silver paper, PVC, paper, board, organic glass, some filmed paper and other materials.

### FINISHED PRODUCTS / END USES

Packaging for wine, cigarettes, stationary, tea, cosmetics and gifts etc.

### PRODUCT INFORMATION

Wrinkle effect on finish, texture can be affected by mesh count and thread diameter.

CHARACTERISTICS	Glossiness	Water Resistance	Alkali Resistance	Solvent Resistance	Flexibility	Adhesion
DESCRIPTION RHUV-Wrinkle	Changes with substrate	Grade 2	Grade 3	Grade 4	Excellent	Good

TECHNICAL PARAMETERS	Appearance	Viscosity @ 77°F (25°C)	Solidification/Curing Speed	Solidification/Curing Power	Resin
DESCRIPTION RHUV-Wrinkle	Transparent or Yellowish	250-300p	49-82 ft/min (15-25m/min)	≥90mj/cm <sup>2</sup>	99%

### APPLICATION INFORMATION

**MESH** Monofilament polyester mesh count 125-255 (48-100T metric) medium thread diameter with a good screen tension of at least 24-26 N/cm<sup>2</sup>

**SQUEEGEE** 65-75 durometer good quality polyurethane solvent resistance blade

#### COVERAGE

Approx. 323-377 square ft/kg (30-35m<sup>2</sup>/kg) with mesh count 196 (72T metric)

#### CURE

By Ultra Violet curing unit, best with 3 - 40 watt lamps and 2 high/medium voltage mercury-vapor lamp at least 5Kw to ensure sufficient UV power for curing.

#### ADDITIVES

Use UV Reducer (#2) to reduce viscosity

#### CLEAN UP

Use organic solvents to clean the screen and wait until it has evaporated before printing

#### NOTE:

1 The printing effect will be affected by water condition of the substrate surface and humidity. If the paper contains plenty of water or it is high in humidity when printing, it may cause the phenomena of mildew or bad adhesion. To solve this problem, the user should:

A. Dry the moist paper by preconditioning in the UV curing unit.

B. Avoid printing in moist surroundings or high humidity.

C. If the image comes off in scales, peels or sheds precondition in the UV curing unit. Peeling or shedding of layer is also known as desquamation.

2 When printing on matte film paper, the process of crinkling will reduce on the contact surface with substrate. At the same time, crinkling can result in product concentration, with decrease in matte film treatment; some wrinkle product then loses adhesion. Choose the proper matte film paper to avoid this problem. User should always pretest substrate to determine the best matte film paper for wrinkle product.

3 When printing on paper covered PVC and organic glass sheet, use alcohol to clean the surface to improve long lasting adhesion.

4 Mesh count, thickness of emulsion, voltage of wrinkle lamps and conveying speed of curing machine are important factors in determining printing effect. Pretest before printing is required.

5. See User Information for more details.

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## RHUV-REFRACTIVE

### SUBSTRATES

Formulated gold or silver paper, laser card, PVC and other materials.

### FINISHED PRODUCTS / END USES

Packaging for wine and cigarette, calendar and gift-wrap etc.

### PRODUCT INFORMATION

High reflectivity (refractive) effect on finish, dazzling and glistening and fine line printability. In combination with vector files a holograph effect can be achieved.

CHARACTERISTICS	Glossiness	Water Resistance	Alkali Resistance	Solvent Resistance	Flexibility	Adhesion
DESCRIPTION RHUV-Refractive	Changes with substrate type	Grade 5	Grade 4	Grade 3	Good	Good

TECHNICAL PARAMETERS	Appearance	Viscosity @ 77°F (25°C)	Solidification/Curing Speed	Solidification/Curing Power	Resin
DESCRIPTION RHUV-Refractive	Transparent liquid	250-300p	65-98 ft/min (20-30m/min)	≥50mj/cm <sup>2</sup>	99%

### APPLICATION INFORMATION

**MESH** Monofilament polyester mesh count 355-420 (140-170T metric) medium thread diameter with a good screen tension of at least 24-26 N/cm<sup>2</sup>

**SQUEEGEE** 75 durometer good quality polyurethane solvent resistance blade

### COVERAGE

Approx. 430-square ft/kg (40m<sup>2</sup>/kg) with mesh count 420 (170T metric)

### CURE

By Ultra Violet curing unit, best with 2 high/medium voltage mercury-vapor lamps at least 5Kw to ensure sufficient UV power for curing.

### ADDITIVES

Use UV Reducer (#1 or #2) to reduce viscosity

### CLEAN UP

Use organic solvents to clean the screen and wait until it has evaporated before printing

### NOTE:

1 The production of film and mesh play an important role in printing refractive effect. The fineness and glossiness of the printed image are determined by the quality of the mesh and substrate glossiness.

2 For fine printing line, pay close attention to adjust the viscosity, squeegee edge sharpness and printing methods.

3 If the squeegee is pneumatically control it is recommended to keep air pressure under 7-8kgf/cm, 0.68-0.78mpa. The squeegee edge quality will be necessary to improve print quality and a rotary cutter will produce the best edge for fine line work. Too much squeegee pressure and a poor squeegee edge will cause blurred image.

4 See User Information for more details.

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## RHUV-120b MATTE

### SUBSTRATES

Formulated paper, card, synthetic paper, PVC, PET, PC and other materials.

### FINISHED PRODUCTS / END USES

Packaging for wine, cigarettes, publishing material, calendar and cosmetic boxes etc.

### PRODUCT INFORMATION

Excellent matte effect on gloss substrates, smooth and close surface imaging characteristics with good adhesion on paper and plastic

CHARACTERISTICS	Glossiness	Water Resistance	Acid Resistance	Alkali Resistance	Flexibility	Adhesion
DESCRIPTION RHUV-120b Matte	8-12	Grade 5	Grade 3	Grade 3	Good	Excellent

TECHNICAL PARAMETERS	Appearance	Viscosity @ 77°F (25°C)	Solidification/Curing Speed	Solidification/Curing Power	Resin
DESCRIPTION RHUV-120b Matte	Milky paste	300p	49-82 ft/min (15-25m/min)	≥120mj/cm <sup>2</sup>	98%

### APPLICATION INFORMATION

#### MESH

Monofilament polyester mesh count 254-355 (100-140T metric) medium thread diameter with a good screen tension of at least 24-26 N/cm<sup>2</sup>

#### SQUEEGEE

70-75 durometer good quality polyurethane solvent resistance blade

#### COVERAGE

Approx. 323-377-square ft/kg (30-35m<sup>2</sup>/kg) with mesh count 355 (140T metric)

#### CURE

By Ultra Violet curing unit, best with 2 high/medium voltage mercury-vapor lamps at least 5Kw to ensure sufficient UV power for curing.

#### ADDITIVES

Use UV Reducer (#1 or #2) to reduce viscosity and UV Adhesion Promoter to improve cure speed

#### CLEAN UP

Use organic solvents to clean the screen and wait until it has evaporated before printing

#### NOTE:

- 1 RHUV-120b is a milky paste that is high in viscosity, thoroughly mix product before printing.
- 2 High gloss substrates may affect the matte effect of the product.
- 3 It is required to pretest before usage.
- 4 See User Information for more details.

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## RHUV-ABRASIVE (GOLDEN, SILVER, SMALL, MID AND STRONG)

**SUBSTRATES** Formulated for coated PVC, PETG, Acrylic, wood, paper, board and many other materials.

### FINISHED PRODUCTS / END USES

Packaging for wine, cigarettes, publishing material, calendar and cosmetic boxes etc.

### PRODUCT INFORMATION

Excellent adhesion on substrate, high durability and sandy effect on finish.

CHARACTERISTICS	Sand Grains	Water Resistance	Acid Resistance	Alkali Resistance	Flexibility	Adhesion
<b>DESCRIPTION</b> RHUV-Abrasive small – strong)	From fine to thick	Grade 5	Grade 5	Grade 5	Good	Excellent
RHUV-Abrasive for Plastic (#0501)	Adjustable	Grade 4	Grade 3	Grade 3	Good	Excellent

TECHNICAL PARAMETERS	Appearance	Viscosity @ 77°F (25°C)	Solidification/Curing Speed	Solidification/Curing Power	Resin
<b>DESCRIPTION</b> RHUV-Abrasive	Milky paste	150-250p	65-98 ft/min (20-30m/min)	≥120mj/cm <sup>2</sup>	98%
RHUV-Abrasive for Plastic (#0501)	Milky paste	250-280p	48-82 ft/min (15-25m/min)	≥120mj/cm <sup>2</sup>	97%

### APPLICATION INFORMATION

**MESH** Strong - monofilament polyester mesh count 110-196 (43-77T metric); Mid – mesh count 196-305 (77-120T metric); Small – mesh count 305-380 (120-150T metric) medium thread diameter with a good screen tension of at least 24-26 N/cm<sup>2</sup> Plastic - monofilament polyester mesh count 110-158 (40-68T metric) medium thread diameter with a good screen tension of at least 24-26 N/cm<sup>2</sup>

**SQUEEGEE** 75-80 durometer good quality polyurethane solvent resistance blade

### COVERAGE

Strong sand: 215 square ft/kg (20m<sup>2</sup>/kg), Mid sand: 269 square ft/kg (25m<sup>2</sup>/kg), Small sand: 377 square ft/kg (35m<sup>2</sup>/kg)

### CURE

By Ultra Violet curing unit, best with 2 high/medium voltage mercury-vapor lamps at least 5Kw to ensure sufficient UV power for curing.

### ADDITIVES

Use UV Reducer (#2 & #3) to reduce viscosity and UV Adhesion Promoter to improve cure speed

### CLEAN UP

Use organic solvents to clean the screen and wait until it has evaporated before printing

### NOTE:

- 1 The texture of (strong – small) sand can be adjusted by choosing various products suited for your desired application and/or mesh count.
- 2 The sand grain effect, appearance, odor and flexibility of the product can be adjusted to meet the requirements of high grade packaging for wine, cigarettes and many other industries.
- 3 See User Information for more details.

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