TECHNICAL DATA SHEET

KS-148

KY Shine Sandy Matte HS OPV

Product Description:

KS-148 is a tactile aqueous overprint varnish for application to paper and paperboard through the inking unit of an offset press where a sandpaper feel is desired. Typical applications would be commercial and publication printing. Please refer to **Kentucky Shine Press Instructions** for press preparation and use. For any additional information please contact your KUSTOM GROUP, LLC representative.

Performance Characteristics:

- Excellent matte finish with gritty, sandpaper like feel
- **For best grit effect,** try applying a slightly heavier film. One way to achieve this is by disengaging one or more form rollers. This adjustment helps improve transfer and increase the film thickness of **KS-148**.
- Care should be taken to adequately dry the thicker film. Please refer to drying requirements below
- Good rub and scuff resistance (test versus specifications prior to use)

Physical Properties:

- **Dynamic Viscosity:** 10 - 50 Poise (Rheometer @25C; 4cm, 2deg cone; 2.5 1/sec)
- **pH:** 7.5 - 8.5 @ 77°
- **Specific Gravity:** 0.929

Application Information:

- **Drying Requirements:** For best results, aqueous overprint varnishes require a sufficient volume of warm air directed onto the varnished surface. However, the lowest possible web temperature is desired that will adequately dry the ink and overprint. This is best determined by experimentation using the actual substrate and inks. If the temperature is too high, the overprint varnish will dry and trapped ink oils may erupt through the varnish layer resulting in blisters or volcanoes.
- For best results, disengage silicone applicator when running this product.
- **Application Weight:** Apply about 20-25% more than oil-based overprints.
- **Ink Formulary:** Limit wax to typical polyethylene to ensure proper inter-coat adhesion.
- PTFE, micro crystalline wax or silicone may contribute to application problems.
- Avoid the use of fugitive pigments that may bleed or change color when in contact with an alkaline product (alkali blue, rhodamine, red lake C, fluorescent, and many others). As a precaution, always evaluate new ink formulations/technologies with this aqueous/glycol overprint varnish.

DATE REVISED 02/13/2017

Technical Data Sheet

KS-411

Sandy Matte UV Coating

Product Description

KS-411 is a matte UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. KS-411's effect can be accentuated by increasing the amout of coating applied. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect, 10-14 BCM recommended for fine feel but may be improved with higher volume anilox or modified coating plate
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

- Viscosity 23 - 26 sec. #4 Zahn
- Specific Gravity 1.13
- Solids > 99%

End Use Considerations

*** KS-411 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-411 and recommends extensive testing and care be used when running KS-411 to minimize these conditions. KS-411 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 05/05/2017

Technical Data Sheet

KS-433

Coarse Sandy Feel UV Coating

Product Description

KS-433 is a UV coating that provides a coarse sandpaper feel when applied using a high volume anilox over multiple types of ink on paper, paperboard and select plastic substrates; should be tested. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Recommended for >= 35 BCM anilox
- Coarse Sandy Feel
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO and WHILE USING

Physical Properties

• Viscosity	45-55" #3 Zahn @ 77F
• Specific Gravity	1.11
• Solids	> 99%

End Use Considerations

*** KS-433 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-433 and recommends extensive testing and care be used when running KS-433 to minimize these conditions. KS-433 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 02/20/2017

Technical Data Sheet

KS-433LV

Low Viscosity Coarse Sandy Feel UV Coating

Product Description

KS-433LV is a UV coating that provides a coarse sandpaper feel when applied with a standard volume anilox over multiple types of ink on paper, paperboard and select plastic substrates; should be tested. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Recommended for 8 – 20 BCM anilox
- Coarse Sandy Feel
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO and WHILE USING

Physical Properties

• Viscosity	30 – 35" #5 Zahn
• Specific Gravity	1.11
• Solids	> 99%

End Use Considerations

*** KS-433LV contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-433LV and recommends extensive testing and care be used when running KS-433LV to minimize these conditions. KS-433LV should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Material Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 02/20/2017

Technical Data Sheet

KS-446

Ultra Matte Sandy UV Coating for Oil Based Ink

Product Description

KS-446 is formulated as a flexible, low viscosity, matte sandy feel UV coating for one-sided in-line application over heatset ink or off-line application over oil-based sheetfed or primed oil-based sheetfed ink on all types of paper or paperboard substrates. KS-446 can also be used for one-sided in-line application over cured UV or Hybrid ink. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel with matte appearance
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING
- Typical recommended volume is 12-20 BCM anilox

Physical Properties

- Viscosity 25-30" #4 Zahn, 77F
- Specific Gravity 1.09
- Solids > 99%

End Use Considerations

*** KS-446 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-446 and recommends extensive testing and care be used when running KS-446 to minimize these conditions. KS-446 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Material Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 02/20/2017

Technical Data Sheet

KS-469

Sandy Matte UV Coating for Plastic

Product Description

KS-469 is recommended for use as a UV coating where high performance, low gloss sandy feel and fast cure response are desired. Typical applications include selected plastic stocks. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Fine sandy feel
- Excellent cure response
- Not considered imprintable, foil-stampable, glueable, etc.
- Excellent adhesion to selected plastics
- Typical recommended application volume is 8-14 BCM anilox

Physical Properties

- Solids > 99%
- Specific Gravity 1.09
- Viscosity 14 - 17 sec. #4 Zahn

End Use Considerations

KS-469 should be evaluated under production conditions, using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable. In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Data Safety Sheet for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to this in this Technical Data Sheet.

DATE REVISED: 05/05/2017

Technical Data Sheet

KS-521

Sandy Gloss UV Coating

Product Description

KS-521 is a gloss UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. KS-521's effect can be accentuated by increasing the amount of coating applied. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect, 10-14 BCM recommended for fine feel but may be improved with higher volume anilox or modified coating plate
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO USING

Physical Properties

- Viscosity 22 – 26 sec. #4 Zahn
- Specific Gravity 1.09
- Solids > 99%

End Use Considerations

*** KS-521 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anolox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-521 and recommends extensive testing and care be used when running KS-521 to minimize these conditions. KS-521 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 03/13/2017

Technical Data Sheet

KS-558

BZP Free Coarse Matte Sandy UV Coating

Product Description

KS-558 is formulated as a fast cure, matte sandy UV coating. KS-558 provides a coarse sandy or rough feel. Applications include paper and paperboard stocks. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Recommended for 8 – 20 BCM anilox
- Benzophenone (BZP) free
- Fast cure with matte gloss
- Unique sandy/rough feel
- Very good hold out on porous stock

Physical Properties

• Viscosity	40 - 45 sec. #3 Zahn
• Specific Gravity	1.17
• Solids	> 99%

End Use Considerations

KS-558 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable. In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 03/17/2017

Technical Data Sheet

KS-600

Sandy Feel Satin UV Coating

Product Description

KS-600 is a satin UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect, 10-14 BCM recommended for fine feel but may be improved with higher volume anilox or modified coating plate
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

- Viscosity 22-26 #4 Zahn
- Specific Gravity 1.11
- Solids > 99%

End Use Considerations

*** KS-600 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-600 and recommends extensive testing and care be used when running KS-600 to minimize these conditions. KS-600 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 05/22/2017

Technical Data Sheet

KS-600HV

High Viscosity Sandy Feel
Satin UV Coating

Product Description

KS-600HV is a high viscosity satin UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect, 10-14 BCM recommended for fine feel but may be improved with higher volume anilox or modified coating plate
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

• Viscosity	30-35 sec #4 Zahn
• Specific Gravity	1.11
• Solids	> 99%

End Use Considerations

*** KS-600HV contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-600HV and recommends extensive testing and care be used when running KS-600HV to minimize these conditions. KS-600HV should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 05/22/2017

Technical Data Sheet

KS-805

BZP Free Coarse Sandy H-UV Coating

Product Description

KS-805 is formulated as a fast cure, matte sandy H-UV coating. KS-805 provides a coarse sandy or rough feel. Applications include paper and paperboard stocks. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Fast cure with matte gloss
- Benzophenone (BZP) free
- Unique sandy/rough feel
- Very good hold out on porous stock
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

• Viscosity	40 - 45 sec. #4 Zahn
• Specific Gravity	1.17
• Solids	> 99%

End Use Considerations

KS-805 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable. In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 01/18/2017

Technical Data Sheet

KS-809

Sandy Matte H-UV Coating

Product Description

KS-809 is a matte H-UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. KS-809's effect can be accentuated by increasing the amout of coating applied. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

• Viscosity	20-24 sec. #4 Zahn
• Specific Gravity	1.13
• Solids	> 99%

End Use Considerations

*** KS-809 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-809 and recommends extensive testing and care be used when running KS-809 to minimize these conditions. KS-809 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, H-UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 01/18/2017

Technical Data Sheet

KS-834

Fine Sandy Satin H-UV/LE-UV Coating

Product Description

KS-834 is a satin H-UV/LE-UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

• Viscosity	22-26 #4 Zahn
• Specific Gravity	1.11
• Solids	> 99%

End Use Considerations

*** KS-834 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-834 and recommends extensive testing and care be used when running KS-834 to minimize these conditions. KS-834 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, H-UV/LE-UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 01/18/2017

TECHNICAL DATA SHEET

KS-9810

Sandy Gloss AQ Coating

Product Description:

KS-9810 is a special effect tactile aqueous coating for application to paper and paperboard with litho in-line coaters and flexo presses that are equipped with chambered doctor blade anilox systems. Typical applications include commercial, folding carton and specialty printing work where a textured or sandpaper finish is desired.

Performance Characteristics:

- Textured or Sandpaper feel with a gloss appearance
- A normal volume anilox roller should provide the desired film thickness for textured properties.
- A chambered doctor blade anilox configuration will exhibit a smoother appearance versus a 2-roll coater.
- **"*MAY BE SUITABLE*"** for hot foil stamping, off-line UV coating, imprinting and gluing applications. KS-9810 should be completely evaluated under production conditions using the actual substrate, ink, and materials for foil stamping, off-line UV coating, imprinting and gluing to ensure satisfaction throughout the entire process.

Application Advisements:

- Mixing before and during use is highly recommended
- Ensure ink system will dry/cure thoroughly. Avoid extreme stay open inks.
- Use short lifts for sheetfed litho jobs with heavy ink coverage.
- *** KS-9810 contains a 30 - 40 micron size dry material that could cause increased wear of printing application materials such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-9810 and recommends extensive testing and care be used to minimize these conditions.

Physical Properties:

- **Viscosity:** 15 - 20" #4 Zahn (Signature) @ 77° F
- **pH:** 8.0 - 8.5 @ 77° F
- **Solids**: 40 - 50% Method 24

Pigment Selection:

Most aqueous coatings are alkaline in pH because of the presence of ammonia and/or amines. Kustom Group recommends avoiding the use of inks containing pigments that may bleed or change color when being exposed to an aqueous coating. Pigments that typically exhibit this alkali sensitivity include YS Rhodamine, BS Rhodamine, Methyl Violet, Fluorescent, Red Lake C, Alkali Blue (Reflex Blue) and possibly other pigments. Many pigments normally considered safe may prove to be problematic in low color strength color matches. The safest option is to use inks formulated to resist this burn potential. As a precaution, we strongly recommend that new pigments and ink formulations be evaluated with this coating.

DATE REVISED 01/05/2015

TECHNICAL DATA SHEET

KS-9815

Sandy Matte AQ Coating

Product Description:

KS-9815 is a special effect tactile aqueous coating for application to paper and paperboard with litho in-line coaters and flexo presses that are equipped with chambered doctor blade anilox systems. Typical applications include commercial, folding carton and specialty printing work where a textured or sandpaper finish is desired.

Performance Characteristics:

- Textured or Sandpaper feel with a matte appearance.
- A normal volume anilox roller should provide the desired film thickness for textured properties.
- A chambered doctor blade anilox configuration will exhibit a smoother appearance versus a 2-roll coater.
- **"*MAY BE SUITABLE*"** for hot foil stamping, off-line UV coating, imprinting and gluing applications. KS-9815 should be completely evaluated under production conditions using the actual substrate, ink, and materials for foil stamping, off-line UV coating, imprinting and gluing to ensure satisfaction throughout the entire process.

Application Advisements:

- Mixing before and during use is highly recommended
- Ensure ink system will dry/cure thoroughly. Avoid extreme stay open inks.
- Use short lifts for sheetfed litho jobs with heavy ink coverage.
- *** KS-9815 contains a 30 - 40 micron size dry material that could cause increased wear of printing application materials such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-9815 and recommends extensive testing and care be used to minimize these conditions.

Physical Properties:

- **Viscosity:** 18 - 23" #4 Zahn (Signature) @ 77° F
- **pH:** 8.0 - 8.5 @ 77° F
- **Solids**: 40 - 50% Method 24

Pigment Selection:

Most aqueous coatings are alkaline in pH because of the presence of ammonia and/or amines. Kustom Group recommends avoiding the use of inks containing pigments that may bleed or change color when being exposed to an aqueous coating. Pigments that typically exhibit this alkali sensitivity include YS Rhodamine, BS Rhodamine, Methyl Violet, Fluorescent, Red Lake C, Alkali Blue (Reflex Blue) and possibly other pigments. Many pigments normally considered safe may prove to be problematic in low color strength color matches. The safest option is to use inks formulated to resist this burn potential. As a precaution, we strongly recommend that new pigments and ink formulations be evaluated with this coating.

DATE REVISED 09/20/2016

TECHNICAL DATA SHEET

KS-9820

Coarse Sandy Feel Semi-Satin AQ Coating

Product Description:

KS-9820 is a special effect tactile aqueous coating for application to paper and paperboard with litho in-line coaters and flexo presses that are equipped with chambered doctor blade anilox systems. Typical applications include commercial, folding carton and specialty printing work where a textured or sandpaper finish is desired.

Performance Characteristics:

- Coarse Textured or Sandpaper feel with a semi-satin appearance
- A normal volume anilox roller should provide the desired film thickness for textured properties.
- A chambered doctor blade anilox configuration will exhibit a smoother appearance versus a 2-roll coater.
- **"*MAY BE SUITABLE*"** for hot foil stamping, off-line UV coating, imprinting and gluing applications. KS-9820 should be completely evaluated under production conditions using the actual substrate, ink, and materials for foil stamping, off-line UV coating, imprinting and gluing to ensure satisfaction throughout the entire process.

Application Advisements:

- Mixing before and during use is highly recommended
- Ensure ink system will dry/cure thoroughly. Avoid extreme stay open inks.
- Use short lifts for sheetfed litho jobs with heavy ink coverage.
- *** KS-9820 contains a 30 - 40 micron size dry material that could cause increased wear of printing application materials such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-9820 and recommends extensive testing and care be used to minimize these conditions.

Physical Properties:

- **Viscosity:** 30 - 35" #4 Zahn (Signature) @ 77° F
- **pH:** 8.0 - 8.5 @ 77° F
- **Solids**: 35 - 45% Method 24

Pigment Selection:

Most aqueous coatings are alkaline in pH because of the presence of ammonia and/or amines. Kustom Group recommends avoiding the use of inks containing pigments that may bleed or change color when being exposed to an aqueous coating. Pigments that typically exhibit this alkali sensitivity include YS Rhodamine, BS Rhodamine, Methyl Violet, Fluorescent, Red Lake C, Alkali Blue (Reflex Blue) and possibly other pigments. Many pigments normally considered safe may prove to be problematic in low color strength color matches. The safest option is to use inks formulated to resist this burn potential. As a precaution, we strongly recommend that new pigments and ink formulations be evaluated with this coating.

DATE REVISED 01/05/2015

TECHNICAL DATA SHEET

KS-9822

Stable Sandy Satin AQ Coating

Product Description:

KS-9822 is a special effect tactile aqueous coating for application to paper and paperboard with litho in-line coaters and flexo presses that are equipped with chambered doctor blade anilox systems. Typical applications include commercial, folding carton and specialty printing work where a textured or sandpaper finish is desired.

Performance Characteristics:

- Textured or Sandpaper feel with a satin appearance
- A normal volume anilox roller should provide the desired film thickness for textured properties.
- A chambered doctor blade anilox configuration will exhibit a smoother appearance versus a 2-roll coater.
- **"*MAY BE SUITABLE*"** for hot foil stamping, off-line UV coating, imprinting and gluing applications. KS-9822 should be completely evaluated under production conditions using the actual substrate, ink, and materials for foil stamping, off-line UV coating, imprinting and gluing to ensure satisfaction throughout the entire process.

Application Advisements:

- Mixing before and during use is highly recommended
- Ensure ink system will dry/cure thoroughly. Avoid extreme stay open inks.
- Use short lifts for sheetfed litho jobs with heavy ink coverage.
- *** KS-9822 contains a 30 - 40 micron size dry material that could cause increased wear of printing application materials such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-9822 and recommends extensive testing and care be used to minimize these conditions.

Physical Properties:

- **Viscosity:** 15 – 20" #4 Zahn (Signature) @ 77° F
- **pH:** 8.0 - 8.5 @ 77° F
- **Solids**: 40 - 50% Method 24

Pigment Selection:

Most aqueous coatings are alkaline in pH because of the presence of ammonia and/or amines. Kustom Group recommends avoiding the use of inks containing pigments that may bleed or change color when being exposed to an aqueous coating. Pigments that typically exhibit this alkali sensitivity include YS Rhodamine, BS Rhodamine, Methyl Violet, Fluorescent, Red Lake C, Alkali Blue (Reflex Blue) and possibly other pigments. Many pigments normally considered safe may prove to be problematic in low color strength color matches. The safest option is to use inks formulated to resist this burn potential. As a precaution, we strongly recommend that new pigments and ink formulations be evaluated with this coating.

DATE REVISED 05/06/2015

TECHNICAL DATA SHEET

KS-9838

Polyboard Sandy Gloss AQ Coating

PRODUCT DESCRIPTION

KS-9838 is an acrylic-based aqueous coating for application to polyboard, paper and select non-porous substrates with anilox coaters. Typical applications include commercial, folding carton and specialty printing work where a textured or sandpaper finish is desired.

PERFORMANCE CHARACTERISTICS

- For stocks with a minimum 40 dyne level
- Formulated specifically for excellent adhesion to polyboard stocks over polyboard lithographic inks.
- Exhibits good gloss and clarity.
- Exhibits good rub and scuff resistance.

PHYSICAL PROPERTIES

- **Viscosity** 20 - 25" #5 Zahn (Signature) @ 77° F
- **pH** 8.7 - 9.2 @ 77° F
- **Solids** 42 - 44% Method 24
- **Shelf Life** One year (unopened container)

Application Advisements:

- Mixing before and during use is highly recommended
- Ensure ink system will dry/cure thoroughly. Avoid extreme stay open inks.
- Use short lifts for sheetfed litho jobs with heavy ink coverage.
- *** KS-9838 contains a 30 - 40 micron size dry material that could cause increased wear of printing application materials such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-9838 and recommends extensive testing and care be used to minimize these conditions.

PIGMENT SELECTION

Most aqueous coatings are alkaline in pH because of the presence of ammonia and/or amines. Kustom Group recommends avoiding the use of inks containing pigments that may bleed or change color when being exposed to an aqueous coating. Pigments that typically exhibit this alkali sensitivity include YS Rhodamine, BS Rhodamine, Methyl Violet, Fluorescent, Red Lake C, Alkali Blue (Reflex Blue) and possibly other pigments. Many pigments normally considered safe may prove to be problematic in low color strength color matches. The safest option is to use inks formulated to resist this burn potential. As a precaution, we strongly recommend that new pigments and ink formulations be evaluated with this coating.

DATE REVISED 10/12/2016

Technical Data Sheet

KS-21006

Sandpaper Screen UV Coating

Product Description

KS-21006 is a gloss UV coating that provides a sandpaper feel upon printing over multiple types of ink on paper or paperboard substrates. KS-21006's effect can be accentuated by increasing the amount of coating applied. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel with excellent gloss
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

• Viscosity	40 - 45 sec. #4 Zahn
• Specific Gravity	1.11
• Solids	> 99%

End Use Considerations

*** KS-21006 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of KS-21006 and recommends extensive testing and care be used when running KS-21006 to minimize these conditions. KS-21006 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, UV coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 02/13/2017

Technical Data Sheet

LED-725

Fine Sandy Matte LED Coating for Flexo Gap

Product Description

LED-725 is a matte LED coating that provides a light sandpaper feel upon printing over multiple types of ink on paper, paperboard and select plastics and film substrates. LED-725's effect can be accentuated by increasing the amout of coating applied. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Textured or Sandpaper feel
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO AND WHILE USING

Physical Properties

• Viscosity	15 - 20 sec. #4 Zahn
• Specific Gravity	1.13
• Solids	> 99%

End Use Considerations

*** LED-725 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of LED-725 and recommends extensive testing and care be used when running LED-725 to minimize these conditions. LED-725 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, LED coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 08/07/2017

Technical Data Sheet

LED-734

Coarse Sandy Feel LED Coating

Product Description

LED-734 is an LED coating that provides a coarse sandpaper feel when applied with a standard volume anilox over multiple types of ink on paper, paperboard and select plastic substrates. For additional information regarding assistance and applications, please contact your KUSTOM SERVICES, INC. representative.

Performance Characteristics

- Recommended for 8 – 20 BCM anilox
- Coarse Sandy Feel
- Excellent cure response
- Multiple application methods for desired effect
- Not considered imprintable, foil-stampable, glueable, etc.
- MUST BE MIXED PRIOR TO and WHILE USING

Physical Properties

• Viscosity	20 – 25" #5 Zahn
• Specific Gravity	1.15
• Solids	> 99%

End Use Considerations

*** LED-734 contains a dry material at a small micron size that could cause increased wear of printing application materials; such as doctor blades, anilox rollers, pumps, etc., or cause other performance issues typically associated with coatings containing dry/abrasive types of material. For this reason, Kustom Group accepts no liability for the use of LED-734 and recommends extensive testing and care be used when running LED-734 to minimize these conditions. LED-734 should be evaluated in the laboratory using the actual ink system and substrate to ensure that leveling, intercoat adhesion, gloss and other performance characteristics are acceptable In general, LED coatings may not exhibit complete intercoat adhesion over some ink systems. A primer may be considered for use if this property needs to be improved.

Storage and Handling Information

Care should be taken not to expose radiation curable products to temperatures exceeding 100°F for prolonged periods of time or to direct sunlight. Storage must be in a cool, shaded, well-ventilated and dry area. To do otherwise might cause uncontrollable polymerization of the product with generation of heat. Do not store this material under an oxygen-free atmosphere. This material should not be stored for more than six (6) months.

Certain precautions should be taken when handling this product. Please refer to the Safety Data Sheet (SDS) for further details. This product contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Since irritation may not occur immediately, contact can go unnoticed. Consult the SDS for appropriate equipment prior to using this or any other materials referred to in this Technical Data Sheet.

DATE REVISED: 01/16/2017