VIK-COMPOSITE

# VACUUM FILMS RANGE

| Name               | Description   | Max. use T°C | Elongation<br>on break | Color         |
|--------------------|---|--------------|------------------------|---------------|
| <u>SK2VF120-1</u>  | Multilayer vacuum film for<br>manufacturing of wide and<br>complex structures         | 120°C        | 460%                   | Green         |
| <u>SK2VF120-E1</u> | Embossed multilayer vacuum film for manufacturing of wide and complex structures      | 120°C        | 460%                   | Green         |
| <u>SK2VF170-1</u>  | Nylon vacuum film for oven<br>and autoclave manufacturing<br>of wide structures       | 180°C        | 380%                   | Green/Pink    |
| <u>SK2VF170-2</u>  | Multilayer vacuum bagging<br>film for manufacturing of wide<br>and complex structures | 177°C        | 405%                   | Blue / Yellow |
| <u>SK2VF170-3</u>  | Multilayer vacuum bagging<br>film for manufacturing of wide<br>and complex structures | 177°C        | 360%                   | Yellow        |
| <u>SK2VF180-1</u>  | Standard nylon vacuum bagging film  | 180°C        | 380%                   | Clear         |
| <u>SK2VF200-1</u>  | Soft nylon vacuum bagging<br>film for autoclave and oven<br>molding                   | 204°C        | 400%                   | Pink/Green    |
| <u>SK2VF200-E1</u> | Embossed soft nylon vacuum<br>bagging film for autoclave<br>and oven molding          | 204°C        | 400%                   | Pink/Green    |
| <u>SK2VF200-2</u>  | Very soft nylon vacuum<br>bagging film for autoclave<br>and oven molding              | 204°C        | 440%                   | Pink          |
| <u>SK2VF200-3</u>  | Tough, high temperature<br>resistant nylon film for<br>infusion and prepreg molding   | 200°C        | 470%                   | Blue          |
| <u>SK2VF204-1</u>  | Ultrasoft nylon vacuum<br>bagging film for autoclave<br>and oven molding              | 204°C        | 450%                   | Orange        |
| <u>SK2VF205-1</u>  | Nylon vacuum film for<br>autoclave and oven<br>applications                           | 205°C        | 400%                   | Green         |
| <u>SK2VF205-2</u>  | Embossed nylon film for debulking processes   | 205°C        | 400%                   | Transparent   |
| <u>SK2VF220-1</u>  | Heat-resistant nylon film for<br>autoclave and oven<br>applications                   | 220°C        | 380%                   | Blue          |



# VACUUM FILMS RANGE

|                               | High temperature resistant                                     | _     |      |             |
|-------------------------------|--|-------|------|-------------|
| <u>SK2VF230-1</u>             | nylon vacuum film  | 230°C | 380% | Light blue  |
| <u>SK2VF246-1</u>             | High temperature resistant soft nylon vacuum film              | 246°C | 375% | Orange      |
| <u>SK2VF260-1</u>             | High-elastic PTFE vacuum film                                  | 260°C | 400% | Yellow      |
| <u>SK2VF400-1</u>             | Ultra-high temperature<br>bagging polyimide film               | 400°C | 85%  | Amber       |
| <u>SK2VR145-1</u>             | Economical self-releasing<br>multilayer vacuum bagging<br>film | 158°C | 410% | Light green |
| <u>SK2VR160-1</u>             | Self-releasing multilayer<br>vacuum bagging film               | 160°C | 445% | Green       |
| Folding shape                 |  |       |      |             |
| Vacuum film dimensional chart |  |       |      |             |
| Resin compatibility           |  |       |      |             |



## SK2VF120-1

Multilayer vacuum bagging film

Back to range

#### ► DESCRIPTION

SK2VF120-1 is a tough, puncture resistant co-extrusion of nylon and polyolefin based resins vacuum film, which is designed for use in the production of polyester / vinylester resin infused components for the wind energy, marine and general composite industries.

The product can be used in the production of epoxy resins prior to testing chemical resistance with specific resin.

It is particularly interesting due to its limited sensitivity to low humidity levels which are often problematic to predominantly nylon based films as the lack of moisture can reduce flexibility. This ensures consistent yearlong performance in all workshop environments.

This product is used in various manufacturing processes of parts made of composite materials.

#### ► TECHNICAL DATA

Test method

| Material type:             |
|----------------------------|
| Color:                     |
| Tensile strength at break: |
| Elongation at break :      |
| Tear strength:             |
| Maximum use temperature:   |

Multilayer Green 39,3 MPa 460% 1,5 N 120°C

ASTM D882 ASTM D882 ISO1683-1

#### SIZES OF FILMS

| Thickness  | Width   | Length | Folding shape |
|------------|---------|--------|---------------|
|            | 2000mm  | 400m   | SHT           |
|            | 4000mm  | 200m   | CF            |
| 75µm ± 10% | 0000    | 105m   | LGT           |
|            | 6000mm  | 125m   | LGT           |
|            | 8000mm  | 80m    | LGT           |
| 80µm ± 10% | 10000mm | 75m    | LGT           |



## SK2VF120-1

Multilayer vacuum bagging film

|         | 12000mm | 75m | LGT |
|---------|---------|-----|-----|
|         | 10000   | 30m | LGT |
| 16000mm | 70m     | LGT |     |

Shelf life: unlimited.

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing, protected from direct sun and heat source.

#### ► NOTE

For the roll with width 16000mm other lengths are available under request.

Folding shapes: SHT - sheeting, CF - centerfold, LFT = lay-flat tubing, LGT- laygusseted tubing. For more information, please read the technical information page: SK2VF\_Folding shape.



#### ► DESCRIPTION

SK2VF120-E1 is a tough, puncture resistant co-extrusion of nylon and polyolefin based resins vacuum film, which is designed for use in the production of polyester / vinylester resin infused components for the wind energy, marine and general composite industries.

The product can be used in the production of epoxy resins prior to testing chemical resistance with specific resin.

It is particularly interesting due to its limited sensitivity to low humidity levels which are often problematic to predominantly nylon based films as the lack of moisture can reduce flexibility. This ensures consistent yearlong performance in all workshop environments.

SK2VF120-E1 can be embossed from one side with the «cracked ice» pattern. It allows for rapid air removal when placed under vacuum, eliminating need for separate layer of breather. The pattern has been developed to provide increased stiffness to assist in maintaining a breathable pattern. Bid width makes compacting large parts faster. For best results, place the raised side on top of a perforated release film against the laminate surface.

This product is used in various manufacturing processes of parts made of composite materials.



Pic.1 Embossing with «cracked ice» pattern



### SK2VF120-E1

Embossed multilayer vacuum bagging film

#### TECHNICAL DATA

Material type: Color: Tensile strength at break : Elongation at break: Tear strength: Maximum use temperature: Multilayer Green 39,3 MPa 460% 1,5 N 120°C Test method

ASTM D882 ASTM D882 ISO1683-1

#### SIZES OF EMBOSSED FILMS

| Thickness | Width  | Folding shape |
|-----------|--------|---------------|
| 75µm      | 1400mm | SHT           |
|           | 3200mm | CF            |
| 80µm      | 1400mm | SHT           |
|           | 3200mm | CF            |

Shelf life: unlimited.

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing, protected from direct sun and heat source.

#### ► NOTE

Embossing is available for film width from 140 cm until 320 cm Folding shapes: SHT - sheeting, CF – centerfold.



#### ► DESCRIPTION

SK2VF170-1 is a highly flexible multilayer nylon vacuum bagging film designed for processing of advanced composite structures and laminated security glass. This film is ideal for use in both oven and autoclave cures, up to a maximum recommended temperature of 170°C. Key benefits of this film are its high elongation and flexibility.

This product is used in various manufacturing processes of parts made of composite materials.

#### TECHNICAL DATA

Material type: Color: Elongation at break: Tensile strength at break: Maximum use temperature: Multilayer Green / Pink 380 % 50 MPa 180°C Test method

ASTM D882 ASTM D882

#### ► SIZE

| Thickness  | Width  | Folding shape |
|------------|--------|---------------|
|            | 100mm  |               |
|            | 200mm  |               |
| 50μm ± 10% | 300mm  |               |
|            | 600mm  | LFT- sheet    |
|            | 900mm  |               |
|            | 1200mm |               |
|            | 1500mm |               |
|            | 2200mm |               |

#### Shelf life: unlimited



Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Film available in thickness from 38  $\mu m$  to 75  $\mu m$  or thicker for glass lamination on demand

Film of bigger sizes are produced under order in the preferred shape. All the other shapes, like CF-sheet can be produced on demand.



## SK2VF170-2

Multilayer vacuum bagging film

Test method

Back to range

#### DESCRIPTION

SK2VF170-2 vacuum bagging film is a tough, high temperature resistant co extruded nylon-based material which is designed for use in the production of advanced composite structures such as wind turbine blades and nacelles, boat hulls and decks, plus other industrial structures. The film is ideal for use in both resin infusion and prepreg moulding applications and is resistant to all commonly used resin systems.

This film is not suitable for use in autoclave processing of composites.

#### **TECHNICAL DATA**

Material type: Color: Elongation at break: Tensile strength: Maximum use temperature: Materials to avoid: Multilayer Blue /Yellow 405% ASTM D882 54MPa ASTM D882 177°C Phenolic resins / Strong oxidizers

#### **STANDARD SIZES**

| Thickness  | Width   | Length | Folding shape |
|------------|---------|--------|---------------|
|            | 2000mm  | 250m   | SHT or CF     |
|            | 3000mm  | 250m   | CF            |
| 50μm ± 10% | 4000mm  | 150m   | CF            |
|            | 6000 mm | 130m   | LGS           |
|            | 8000mm  | 75m    | LGS           |
|            | 10500mm | 75m    | LGS           |
|            | 12000mm | 75m    | LGS           |
| 65µm ± 10% | 2000mm  | 250m   | SHT or CF     |





### SK2VF170-2

Multilayer vacuum bagging film

|            | 3000mm  | 250m | CF        |
|------------|---------|------|-----------|
|            | 4000mm  | 150m | CF        |
|            | 6000 mm | 130m | LGS       |
|            | 8000mm  | 75m  | LGS       |
|            | 10500mm | 75m  | LGS       |
|            | 12000mm | 75m  | LGS       |
|            | 2000mm  | 250m | SHT or CF |
|            | 3000mm  | 250m | CF        |
|            | 4000mm  | 150m | CF        |
| 75µm ± 10% | 6000 mm | 130m | LGS       |
|            | 8000mm  | 75m  | LGS       |
|            | 10500mm | 75m  | LGS       |
|            | 12000mm | 75m  | LGS       |

Shelf life: unlimited.

Storage conditions: recommended temperatures between +5°C and +25°C in original packing, protected from direct sun and heat source.

#### NOTE

Other lengths are available under request.

Other colors are available under request. Width up to 12 meters wide. Film up to 4,6m wide supplied in sheet and V sheet. Widths 6m and above supplied gusseted, centrally slit.

Folding shapes: SHT- sheet, CF - centerfold, LGS- lay-gusseted slit. For more information, please read the technical information page: SK2VF\_Folding shape.



#### ► DESCRIPTION

SK2VF170-3 vacuum bagging film is a tough, high temperature resistant co extruded nylon-based material which is designed for use in the production of advanced composite structures such as wind turbine blades and nacelles, boat hulls and decks, plus other industrial structures. The film is ideal for use in both resin infusion and prepreg moulding applications and is resistant to all commonly used resin systems.

This film is not suitable for use in autoclave processing of composites.

#### TECHNICAL DATA

Material type: Color: Elongation at break: Tensile strength: Maximum use temperature: Materials to avoid: Test method Multilayer Yellow 360% ASTM D882 40MPa ASTM D882 177°C Phenolic resins / Strong oxidizers

#### SIZE (STANDARD)

| Thickness | Width  | Folding shape |
|-----------|--------|---------------|
| 50µm      | 3000mm | CF            |
|           | 4000mm | CF            |
| 65µm      | 3000mm | CF            |
|           | 4500mm | CF            |
|           | 6000mm | LGS           |
| 75µm      | 4000mm | CF            |
|           | 6000mm | LGS           |

Shelf life: unlimited.

Storage conditions: recommended temperatures between +5°C and +25°C in original packing, protected from direct sun and heat source. Because it's structure and nature SK2VF170-3 is a quite stiff film and needs some conditioning before use at a reasonable level of humidity in the workshop.



#### NOTE

Maximum width available 12 m (LGS).

Other widths and colors are available under request depending on the volume of order. This product can be recycled.



#### ► DESCRIPTION

Transparent nylon bagging film with good elongation which could be used for cure cycle by temperatures up to 180°C.

This product is used in various manufacturing processes of parts made of composite materials.

#### TECHNICAL DATA

| Material type:                       | Nylon            |  |
|--------------------------------------|------------------|--|
| Color:                               | Clear            |  |
| Elongation at break:                 | 380%             |  |
| Tensile strength:                    | 75 MPa           |  |
| Recommended use temperature:         | 180°C            |  |
| Maximum use temperature:             | 200°C            |  |
| Materials to avoid:                  | Strong oxidizers |  |
| Maximum recommended pressure: 14 bar |                  |  |

Test method

ASTM D882 ASTM D882

#### SIZE

Please, check dimensional chart in this section for dimensional information.

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### NOTE

Available thickness: from 19µm till 75µm Available widths till 2,3m tubular and 4,60m v-sheet. By special request MOQ has to be ordered. Film available as: SHT - sheeting, CF - centerfold, LFT - lay-flat tubing



#### ► DESCRIPTION

SK2VF200-1 – is soft transparent nylon bagging film with very good elongation for using in cure cycles by temperatures up to 200°C in autoclaves and ovens.

This product is used in various manufacturing processes of parts made of composite materials.

#### **TECHNICAL DATA**

Material type: Color: Elongation at break: Tensile strength: Recommended use temperature: Maximum use temperature: Melting Point: Materials to avoid: Test method

ASTM D882 ASTM D882

215° C Phenolic resins/Strong oxidizers

#### SIZE

Please, check dimensional chart in this section for dimensional information.

Nylon Pink/Green

400%

80MPa

200°C

204°C

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Other thicknesses and width are available on special order: Thickness available: 50 and 75µm Max. widths available: 3000mm LFT or 6000mm CF for thickness of 50 µm. 4000mm LFT or 8000mm CF for thickness of 75 µm. By special request MOQ has to be ordered. Film available as: SHT - sheeting, CF - centerfold, LFT - lay-flat tubing.



#### ► DESCRIPTION

SK2VF200-E1 – is soft transparent nylon bagging film with very good elongation for using in cure cycles by temperatures up to 200°C in autoclaves and ovens.

SK2VF200-E1 can be embossed from one side with the «cracked ice» pattern. It allows for rapid air removal when placed under vacuum, eliminating need for separate layer of breather. The pattern has been developed to provide increased stiffness to assist in maintaining a breathable pattern. Bid width makes compacting large parts faster. For best results, place the raised side on top of a perforated release film against the laminate surface.

This product is used in various manufacturing processes of parts made of composite materials.



Pic.1 Embossing with «cracked ice» pattern

#### ► TECHNICAL DATA

Test method

| Material type:              | Nylon                            |
|-----------------------------|----------------------------------|
| Color:                      | Pink/Green                       |
| Elongation at break:        | 400 % AS                         |
| Tensile strength:           | 80 MPa AS                        |
| Recommended use temperature | e: 200°C                         |
| Maximum use temperature     | 204°C                            |
| Melting Point:              | 215° C                           |
| Materials to avoid          | Phenolic resins/Strong oxidizers |
|                             |                                  |

ASTM D882 ASTM D882



### SK2VF200-E1 Embossed vacuum film

SIZE

| Thickness | Wide   | Folding shape |
|-----------|--------|---------------|
| 50        | 1400mm | SHT           |
| 50µm      | 3200mm | CF            |
| 75.00     | 1400mm | SHT           |
| 75µm      | 3200mm | CF            |

Please, check dimensional chart in this section for dimensional information.

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Embossing is available for film width from 140 cm until 320 cm. Film available as: SHT - sheeting, CF - centerfold.



#### ► DESCRIPTION

SK2VF200-2 – is very soft transparent nylon bagging film with high elongation for using in cure cycles by temperatures up to 204°C in autoclaves and ovens. It is recommended for bagging applications where a higher softness is required.

This product is used in various manufacturing processes of parts made of composite materials.

#### ► TECHNICAL DATA

Material type: Color: Elongation at break: Tensile strength: Maximum use temperature: Melting Point: Materials to avoid: Test method

ASTM D882 ASTM D882

215° C Phenolic resins/Strong oxidizers

#### SIZE

Please, check dimensional chart in this section for dimensional information.

Nylon

440 %

204°C

80 MPa

Pink

Shelf life: unlimited Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### NOTE

Available thickness: 50 and 75μm Maximum available widths: 3000mm LFT or 6000mm CF for thickness of 50 μm. 4000mm LFT or 8000mm CF for thickness of 75 μm. By special request MOQ has to be ordered. Film available as: SHT - sheeting, CF - centerfold, LFT - lay-flat tubing.



#### ► DESCRIPTION

SK2VF200-3 vacuum bagging film is a tough, high temperature resistant co extruded nylon-based material which is designed for use in the production of advanced composite structures such as wind turbine blades and nacelles, boat hulls and decks, plus other industrial structures. The film is ideal for use in both resin infusion and prepreg moulding applications and is resistant to all commonly used resin systems.

This film is not suitable for use in autoclave processing of composites.

This product is used in various manufacturing processes of parts made of composite materials.

#### ► TECHNICAL DATA

Material type: Color: Max elongation: Tensile strength: Maximum use temperature: Density: Thickness: Nylon Blue 470 % 65 MPa 200°C 1,048 g/cm3 75 µm Test method

ASTM D882 ASTM D882

Shelf life: unlimited.

Storage conditions: it is recommended to store at temperatures between +5°C and +25°C in original packing.

#### ► NOTE

Up to 12 metres wide. Film up to 4,6m wide supplied in sheet and V sheet. Widths 6m and above supplied gusseted, centrally slit as standard.



#### ► DESCRIPTION

SK2VF204-1 – is nylon bagging film with high level of elongation for using in cure cycles by temperatures up to 204°C in autoclaves and ovens. It is recommended for bagging applications where a higher softness is required for production of parts with multiple contours.

#### ► TECHNICAL DATA

| Material type:           | Nylon                            |
|--------------------------|----------------------------------|
| Color:                   | Orange                           |
| Tensile strength:        | 69 MPa                           |
| Elongation at break:     | 450%                             |
| Maximum use temperature: | 204°C                            |
| Materials to avoid:      | Phenolic resins/Strong oxidizers |

#### 

| Thickness | Width | Length | Folding shape   |
|-----------|-------|--------|-----------------|
| 50µm      | 3,56m | 305m   | CF - centrefold |

Shelf life: unlimited

Storage conditions: it is recommended to store at temperature from +10°C till +30°C in original packing.

#### NOTE

Maximum use temperature should be determined in actual process conditions. The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, we recommend testing prior to use.



#### ► DESCRIPTION

Transparent nylon bagging film is formulation of Nylon 6 and Nylon 66 resin. Film has very good elongation and could be used for cure cycle by temperatures up to 205°C.

This product is used in various manufacturing processes of parts made of composite materials.

15.400-19.000 psi

Phenolic resins/Strong oxidizers

#### **TECHNICAL DATA**

Material type: Color Elongation at break Tensile strength Maximum use temperature Melting Point: Materials to avoid Test method

ASTM D882 ASTM D882

#### SIZE

Please, check dimensional chart in this section for dimensional information.

Nylon

Green

400%

205°C

>240°

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Other thicknesses and width are available on special order: Thickness: from 19µm till 76µm Widths: 0,91m till 3,55m. By special request MOQ has to be ordered. Film available as: SHT - sheeting, CF - centerfold, LFT - lay-flat tubing.



#### DESCRIPTION

SK2VF205-2 is an embossed etched nylon bagging film recommended for advanced composite manufactured under vacuum moulding or infusion. The structure allows a good resin or air flow. By using this film you replace both: net bleeder and breather. Perfect for debulking operation. This etched film has an excellent heat stability and very good mechanical properties. It is a styrene resistant film and non-porous. Do not use this film in direct contact with phenol resin.

This product is used in various manufacturing processes of parts made of composite materials.

#### ► TECHNICAL DATA

Material type:NylonColor:TransparentWeight:84g/m²Elongation at break:400%Maximum use temperature205°CMaterials to avoidPhenolic resinsDensity:1,12g/cm³

Test method

ASTM D882

#### SIZE

| Thickness | Width  | Length |
|-----------|--------|--------|
| 75µm      | 1600mm | 125m   |

#### Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing. Do not expose this film to the day light. Film is UV sensitive.



#### NOTE

Film available as: SHT – sheeting Total thickness of film though embossing is 430µm.



#### ► DESCRIPTION

Unique nylon bagging film is formulation of Nylon 66 resin. Film provides superior chemical and thermal resistance and could be used for cure cycle by temperatures up to 220°C.

This product is used in various manufacturing processes of parts made of composite materials.

#### **TECHNICAL DATA**

Material type: Color Elongation at break Tensile strength Maximum use temperature Melting Point: Materials to avoid

Blue 380% 12.500-17.300 psi 220°C 256°C Strong oxidizers Test method

ASTM D882 ASTM D882

#### ► SIZE

Please, check dimensional chart in this section for dimensional information.

Nylon

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### NOTE

Other thicknesses and width are available on special order: Thickness: from 19µm till 76µm Widths: 0,91m till 3,55m. By special request MOQ has to be ordered. Film available as: SHT - sheeting, CF - centerfold, LFT - lay-flat tubing



Test method

#### ► DESCRIPTION

TECHNICAL DATA

SK2VF230-1 – is a tough, high temperature resistant co extruded mono-nylon film designed for use in the production of advanced composite structures in aerospace industry. The film is resistant to most of common resins, as well as to bismaleimide resins.

This product is used in various manufacturing processes of parts made of composite materials.

| Material type:          | Nylon                  |           |
|-------------------------|------------------------|-----------|
| Color:                  | Light sky blue         |           |
| Density:                | 1,12 g/cm <sup>3</sup> | internal  |
| Elongation at break:    | 380%                   | ASTM D638 |
| Tensile strength:       | 75 MPa                 | ASTM D882 |
| Maximum use temperature | 230°C                  |           |

#### ► SIZE

| Thickness | Width  | Length | Folding shape |
|-----------|--------|--------|---------------|
| 50µm      | 1500mm | 300m   | SHT           |
| 75µm      | 1500mm | 300m   | SHT           |

Shelf life: unlimited

Storage conditions: it is recommended to store at temperature from +10°C until +30°C in original packing.

#### NOTE

Other thicknesses and width are available on special order: Thickness available: 50 and 75µm Widths available: from 800mm to 1575mm LFT (1600mm till 3150mm open width). Film available as: SHT - sheeting, CF - centerfolded and LFT - lay-flat tubing



#### ► DESCRIPTION

SK2VF246-1 – is soft nylon bagging film that can be used when high temperature (up to 246°C) and high pressure are required. It is the recommended material for cures with phenolic resins.

This product is used in various manufacturing processes of parts made of composite materials.

#### ► TECHNICAL DATA

Material type: Color: Elongation at break MD: Tensile strength: Recommended working T: Max. use T\*: Melting point: Materials to avoid:

Orange 375% 62 MPa 218°C up to 246°C 255°C Strong oxidizers Test method

ASTM D882 ASTM D882

#### SIZE

Please, check dimensional chart in this section for dimensional information.

Nylon

Shelf life: unlimited Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Other thicknesses, width and colors are available on special order Thickness available: 50 and 75µm

Widths available: 1525mm LFT or 3050mm CF for thickness of 50 µm

\* Maximum use temperature should be determined in actual process conditions.

The maximum use temperature depends on the duration at maximum temperature and is process specific, we recommend testing prior to use. Product sustains short temperature spikes up to 246°C.



#### ► DESCRIPTION

SK2VF260-1 is a cast fluoropolymer vacuum film product that consists of a 100% PTFE film with a surface treatment/modification for adhesive bonding and/or lamination to various substrates. Several colors and several treatments are available.

This product is used in various manufacturing processes of parts made of composite materials.

#### ► TECHNICAL DATA

| Material type:            | PTFE           |
|---------------------------|----------------|
| Color:                    | Yellow         |
| Working temperature:      | -73°C to 260°C |
| Elongation at break:      | 400%           |
| Tensile strength minimum: | 2000 psi       |
| Surface tension minimum:  | 40 dynes       |

#### SIZE

| Reference           | Thickness | Width  | Length |
|---------------------|-----------|--------|--------|
| SK2VF260-1YW5012250 | 50µm      | 1,22 m | 50 m   |
| SK2VF260-1YW7512250 | 75µm      | 1,22 m | 50 m   |

#### Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Length of roll can be modified according to the client needs. Maximum available width is 1,42m. Available colors at request: Red, White, Blue, Tan



#### ► DESCRIPTION

SK2VF400-1 – is polyimide vacuum film that provides excellent electrical, thermal, physical, and chemical properties over a wide temperature range from -265°C until +400°C in a lightweight package making it superior for a wide array of applications. Product advantages include high electric strength, isotopic property, dimensional stability, scratch and abrasion resistance.

This product is used in various manufacturing processes of parts made of composite materials.

#### TECHNICAL DATA

Material type: Color: Elongation at break: Tensile strength: Density: Dielectric constant: Heat shrinkage: Recommended working T: Max. use T\*: Polyimide Amber 85% 25 Kgf/mm<sup>2</sup> 1.46 g/cm<sup>2</sup> 3.3 0.05 235°C up to 400°C Test method

ASTM D882 ASTM D882 ASTM D1505

ASTM D5213-04

#### SIZE

| Thickness | Width  | Length |
|-----------|--------|--------|
| 12µm      | 1570mm | 152m   |
| 25µm      | 1570mm | 152m   |
| 50µm      | 1570mm | 152m   |
| 75µm      | 1570mm | 152m   |

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.



#### NOTE

Maximum roll length 1524 m.

\* Maximum use temperature should be determined in actual process conditions.

The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, we recommend testing prior to use.



#### ► DESCRIPTION

SK2VR145-1 is an economical self-releasing multilayer vacuum bagging film that can be used for cure cycles up to 145°C, which provide antiadhesion from most resins used in manufacturing in aerospace, marine and entertaining products industries. It can be used as vacuum bag and as release film. Due to multilayer structure the film has improved strength and heat resistance characteristics. It is suitable both for polyester, vinylester and epoxy resins.

| TECHNICAL DATA<br>method         |                               | Test     |
|----------------------------------|-------------------------------|----------|
| Material type:                   | Multilayer Polyolefin + Nylon |          |
| Color:                           | Light green                   |          |
| Thickness:                       | 30 µm, 50 µm and 75µm         | ISO 4593 |
| Density:                         | 0,97 g/cm <sup>3</sup>        |          |
| Tensile strength at break:       | 65 MPa                        | ASTM     |
| D882                             |                               |          |
| Elongation at break:             | 410%                          | ASTM     |
| D882                             |                               |          |
| Recommended working temperature: | 145°C                         | ASTM     |
| D882                             |                               |          |
| Maximum use temperature*:        | 158°C                         |          |

#### SIZE

| Thickness | Width  | Folding shape |
|-----------|--------|---------------|
| 30µm      | 1500mm | SHT - sheet   |

Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

Perforation PJ, PK and PL is available for this film.

\* Maximum use temperature should be determined in actual process conditions.



#### ► DESCRIPTION

SK2VR160-1 is a self-releasing multilayer vacuum bagging film designed for processing of hollow advanced composite structures where easy removal of the bag following the cure is desirable to as to avoid damage to the component. It can be used for manufacturing of hollow parts such as bicycle components, masts, fishing rods, etc. The film is ideal for use in both oven and autoclave cures, up to a maximum recommended temperature of 160°C. It is compatible with phenolic, polyester and epoxy resins.

#### ► TECHNICAL DATA

Test method

| Material type:              | Polyolefin nylon mixture |           |
|-----------------------------|--------------------------|-----------|
| Color:                      | Green                    |           |
| Thickness:                  | 70µm                     |           |
| Elongation at break:        | 445 %                    | ASTM D882 |
| Tensile strength (at break) | 42 MPa                   | ASTM D882 |
| Maximum use temperature:    | 160°C                    |           |

#### SIZE

| Thickness | Width           | Folding shape           |
|-----------|-----------------|-------------------------|
| 70µm      | 3000mm – 8000mm | LFT – lay-gusseted tube |
| 70µm      | 860mm - 2500 mm | LGS - lay-gusseted slit |

#### Shelf life: unlimited

Storage conditions: it is recommended to store at temperatures between +10°C and +30°C in original packing.

#### ► NOTE

By ordering of a narrow sleeve this film can supplied as LGT folding shape, thus simplifying laying in the closed contractions.

This film is also available in 30 micron thinness with PJ perforation. In this case the reference for ordering is SK2VR164-1GNPJ30150500SHT.



It remains responsibility of the user to verify that this product meet the requirement of the process applied.

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LGT: The width of the film indicated in the reference corresponds to 2W+4P.

#### LGS = lay-gusseted slit

Depends on the thickness and width the film can be pleated in 3 possible ways:



V1: The width of the film indicated in the reference corresponds to 2W+4P.

V2: The width of the film indicated in the reference corresponds to 2W+4P1.



V3: The width of the film indicated in the reference corresponds to 2W+4P1+2P2.



### Dimensional chart Vacuum film

#### Back to range

#### SHT (sheeting)

#### Data for film in 2 mil (50µm)

| Width | is (W) | Leng | th (L) | Weight roll<br>appr . |    |
|-------|--------|------|--------|-----------------------|----|
| inch  | m      | ft   | m      | lb                    | kg |
| 54    | 1,37   | 2000 | 610    | 106                   | 48 |
| 60    | 1,52   | 1000 | 305    | 59                    | 27 |
| 72    | 1,83   | 1000 | 305    | 70                    | 32 |

#### CF (centerfold)

#### Data for film in 2 mil (50µm)

| Width | is (W) | Leng | th (L) | Weight roll<br>appr . |    |
|-------|--------|------|--------|-----------------------|----|
| inch  | m      | ft   | m      | lb                    | kg |
| 96    | 2,44   | 1000 | 305    | 94                    | 43 |
| 108   | 2,74   | 750  | 229    | 79                    | 36 |
| 120   | 3,05   | 750  | 229    | 88                    | 40 |
| 140   | 3,56   | 750  | 229    | 103                   | 47 |

#### LFT (lay-flat tubing)

#### Data for film in 2 mil (50µm)

| Width | s (W) | Leng | th (L) | Weight roll<br>appr . |    |
|-------|-------|------|--------|-----------------------|----|
| inch  | m     | ft   | m      | lb                    | kg |
| 27    | 0,69  | 1000 | 305    | 53                    | 24 |
| 36    | 0,92  | 1000 | 305    | 70                    | 32 |
| 48    | 1,22  | 1000 | 305    | 94                    | 43 |
| 54    | 1,37  | 1000 | 305    | 106                   | 48 |
| 60    | 1,52  | 1000 | 305    | 117                   | 53 |
| 70    | 1,78  | 750  | 229    | 103                   | 47 |



Data for film in 3 mil (75µm)

| Width | is (W) | Length (L) |     | Weig<br>ap | ht roll<br>pr . |
|-------|--------|------------|-----|------------|-----------------|
| inch  | m      | ft m       |     | lb         | kg              |
| 54    | 1,37   | 1500 457   |     | 119        | 54              |
| 60    | 1,52   | 1000       | 305 | 88         | 40              |
| 72    | 1,83   | 1000 305   |     | 106        | 48              |



#### uata for film in 3 mil ( 75μm)

| Widths (W) |      | Leng    | th (L)  | Weight roll<br>appr . |    |
|------------|------|---------|---------|-----------------------|----|
| inch       | m    | ft      | m       | lb                    | kg |
| 96         | 2,44 | 1000    | 000 305 |                       | 64 |
| 108        | 2,74 | 750 229 |         | 119                   | 54 |
| 120        | 3,05 | 750     | 229     | 132                   | 60 |
| 140        | 3,56 | 750 229 |         | 154                   | 70 |
| W          |      |         |         |                       |    |



#### Data for film in 3 mil (75µm)

| Width | Widths (W) |         | th (L) | Weight roll<br>appr . |    |  |
|-------|------------|---------|--------|-----------------------|----|--|
| inch  | m          | ft      | m      | lb                    | kg |  |
| 27    | 0,69       | 750     | 229    | 60                    | 27 |  |
| 36    | 0,92       | 750     | 229    | 79                    | 36 |  |
| 48    | 1,22       | 750 229 |        | 106                   | 48 |  |
| 54    | 1,37       | 750     | 229    | 119                   | 54 |  |
| 60    | 1,52       | 750     | 229    | 132                   | 60 |  |
| 70    | 1,78       | 750     | 229    | 154                   | 70 |  |

#### NOTE

Other thicknesses and width are available on special order: Thickness: from 19µm till 76µm. Width: from 0,91m till 3,56m By special request MOQ has to be ordered.



The following guideline is intended for reference only. STEVIK cannot control processing parameters or test all the materials available at the market. Risk reduction panel testing is strongly recommended before serial production. Please ask us for sample of vacuum film for testing. Film selection should be based on temperature requirement.

#### Compatible: V

To avoid: X

|                    | Max.       |       | Resins                       |          |     |                  |                       |
|--------------------|------------|-------|------------------------------|----------|-----|------------------|-----------------------|
| Name               | use<br>T°C | Ероху | Polyester<br>&<br>Vinylester | Phenolic | BMI | Cyanate<br>Ester | Using in<br>autoclave |
| <u>SK2VF120-1</u>  | 120°C      | V     | V                            | Х        | Х   | Х                | NO                    |
| <u>SK2VF120-E1</u> | 120°C      | V     | V                            | Х        | Х   | Х                | NO                    |
| <u>SK2VR145-1</u>  | 145°C      | V     | V                            | V        | Х   | Х                | NO                    |
| <u>SK2VR160-1</u>  | 160°C      | V     | V                            | V        | Х   | Х                | YES                   |
| <u>SK2VF170-1</u>  | 170°C      | V     | V                            | V        | Х   | Х                | YES                   |
| <u>SK2VF170-2</u>  | 177°C      | V     | V                            | V        | Х   | Х                | NO                    |
| <u>SK2VF170-3</u>  | 177°C      | V     | V                            | V        | V   | V                | NO                    |
| <u>SK2VF180-1</u>  | 180°C      | V     | V                            | Х        | V   | V                | YES                   |
| <u>SK2VF195-1</u>  | 180°C      | V     | Х                            | V        | Х   | Х                | YES                   |
| <u>SK2VF200-1</u>  | 200°C      | V     | V                            | Х        | V   | V                | YES                   |
| <u>SK2VF200-E1</u> | 200°C      | V     | V                            | Х        | V   | V                | YES                   |
| <u>SK2VF200-2</u>  | 204°C      | V     | V                            | Х        | V   | V                | YES                   |
| <u>SK2VF200-3</u>  | 200°C      | V     | V                            | х        | V   | V                | NO                    |
| <u>SK2VF204-1</u>  | 204°C      |       |                              | Х        |     |                  |                       |
| <u>SK2VF205-1</u>  | 205°C      | V     | V                            | Х        | V   | V                | YES                   |



## **Resin compatibility**

Vacuum bag film selection guide

| <u>SK2VF205-2</u> | 205°C | V | V | Х | V | V | YES |
|-------------------|-------|---|---|---|---|---|-----|
| <u>SK2VF220-1</u> | 220°C | V | V | V | V | V | YES |
| <u>SK2VF230-1</u> | 230°C | V | V | V | V | V | YES |
| <u>SK2VF246-1</u> | 246°C | V | V | V | V | V | YES |
| <u>SK2VF260-1</u> | 260°C | V | V | V | V | V | YES |
| <u>SK2VF400-1</u> | 400°C | V | V | V | V | V | YES |