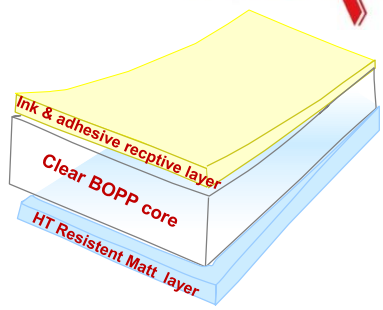
# CSKHT

## Improved Thermal Resistance Matt Film

**Properties**

- ✓ Improved thermal resistance
- ✓ Excellent dimensional stability
- ✓ Superior stiffness
- ✓ One side matt , other side glossy
- ✓ Treated on the glossy side
- ✓ Excellent slip properties




**Typical Applications**

Matt layer in Duplex and Triplex monoPP structures for High Thermal demanding applications

| PROPERTIES | | VALUE | UNIT | TEST METHOD |
|---|---|---|---|---|
| **Thickness** | | **20** | micron | DIN EN ISO 2286- 1/2/3 |
| **Grammage** | | **17,5** | g/m² | |
| **Yield** | | **57,14** | m²/kg | |
| **TENSILE PROPERTIES** | | | | |
| **Tensile Strength** | MD | **160** | N/mm² | ASTM D882<br>DIN EN ISO 527-1/3 |
| | TD | **300** | N/mm² | |
| **Elongation** | MD | **220** | % | |
| | TD | **70** | % | |
| **Secant Modulus 100%** | MD | **95** | N/mm² | |
| **Elastic Modulus 1%** | MD | **2000** | N/mm² | |
| **OPTICAL PROPERTIES** | | | | |
| **Gloss 45°** | | **9** | Gloss unit | ASTM D2457 |
| **Haze** | | **75** | % | ASTM D1003 |
| **THERMAL STABILITY** | | | | |
| **Shrinkage (hot air 130°C - 5')** | MD | **3** | % | OPMA TC4a |
| | TD | **1** | % | |
| **COEFFICIENT OF FRICTION** | | | | |
| **Matt/ Matt** | dynamic | **0,30** | | ASTM D1894<br>DIN EN ISO 8295-04 |
| **TREATMENT** | | | | |
| **Treatment level** | | **38** | dyne/cm | ASTM D2578 |
| **DO NOT REFRESH THE TREATMENT** | | | | |

**Guidelines for storage of OPP film**

No special conditions are required fort the storage of OPP films, however it is recommended that dry conditions below 30°C are employed to minimize any deterioration of film properties and surface treatment level. All OPP films should be allowed to reach operation room temperature for 24 hours before use. Films are suitable for use within 6 months from date of delivery

**Food contact**

Vibac **CSKHT** complies to the requirements of EEC directives and FDA regulations Specific documentation and migration test results are available upon request. The results obtained and above properties refer to average values of laboratory tests on samples of our standard production. It is understood that this entails no obligation and/or other responsibility on our part. Customer should verify the suitability of the film for its specific end use, therefore this document will not represent a product specification. Vibac does not guarantee the typical (or other) values. Analysis may be performed on representative samples and not the actual product shipped.

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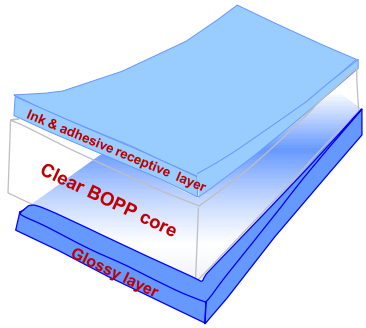
*Ed.3; rev.:1; 28.06.2023; second emission*

# Not Sealable Transparent Film

## Properties

- ✓ Improved thermal resistance
- ✓ Excellent dimensional staility
- ✓ Superior stiffness
- ✓ Excellent optical properties
- ✓ Outstanding printing characteristics




## Typical Applications

REB is specially designed to be used as outside web of laminates as alternative to BOPET

| PROPERTIES | | VALUE | | | UNIT | TEST METHOD |
|---|---|---|---|---|---|---|
| **Thickness** | | **18** | **20** | **30** | micron | DIN EN ISO 2286- 1/2/3 |
| **Grammage** | | **16,38** | **18,20** | **27,30** | g/m² | |
| **Yield** | | **61,05** | **54,95** | **36,63** | m²/kg | |
| **TENSILE PROPERTIES** | | | | | | |
| **Tensile Strength** | MD | **170** | | | N/mm² | ASTM D882 DIN EN ISO 527-1/3 |
| | TD | **300** | | | N/mm² | |
| **Elongation** | MD | **170** | | | % | |
| | TD | **60** | | | % | |
| **Secant Modulus 100%** | MD | **115** | | | N/mm² | |
| **Elastic Modulus 1%** | MD | **2500** | | | N/mm² | |
| **OPTICAL PROPERTIES** | | | | | | |
| **Gloss 45°** | | **90** | | | Gloss unit | ASTM D2457 |
| **Haze** | | **1,75** | **1,75** | **1,90** | % | ASTM D1003 |
| **THERMAL STABILITY** | | | | | | |
| **Shrinkage (hot air 130°C - 5')** | MD | **2,5** | | | % | OPMA TC4a |
| | TD | **0,5** | | | % | |
| **COEFFICIENT OF FRICTION** | | | | | | |
| **Untr / Untr** | dynamic | **0,21** | | | | ASTM D1894 DIN EN ISO 8295-04 |
| **Untr / Met** | dynamic | **0,20** | | | | |
| **PERMEABILITY** | | | | | | |
| **Oxygen Transmission Rate** | 23°C-0% R.H. | **2050** | **1860** | **1250** | cc/(m² d atm) | ASTM D3985 |
| **Water Vapor Transmission Rate** | 37.8°C-100% R.H. | **7,0** | **6,5** | **5,0** | g/(m² d) | ASTM F1249 |
| | 23°C-85% R.H. | **1,6** | **1,4** | **1,1** | " | DIN 53122 |
| **TREATMENT** | | | | | | |
| **Treatment level** | | **38** | | | dyne/cm | **IOQ 730.1.27 Softal pencil** |
| **DO NOT USE CORONA TREATMENT BEFORE PRINTING OR LAMINATION** | | | | | | |

**Guidelines for storage of OPP film**

No special conditions are required fort the storage of OPP films, however it is recommended that dry conditions below 30°C are employed to minimize any deterioration of film properties and surface treatment level. All OPP films should be allowed to reach operation room temperature for 24 hours before use. Films are suitable for use within 6 months from date of delivery

**Food contact**

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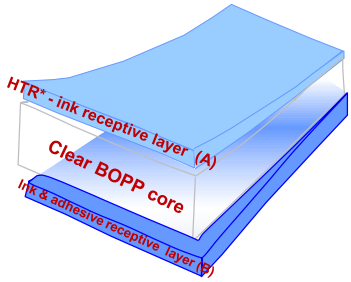
*Ed.3; rev.: 3; 03.07.2023; fourth emission*

# Not Sealable Transparent Treated on both sides

## Properties

- ✓ Improved thermal resistance
- ✓ Excellent dimensional stability
- ✓ Superior stiffness
- ✓ Excellent optical properties
- ✓ Outstanding printing characteristics
- ✓ Treated on both sides




*HTR: high thermal resistant*

## Typical Applications

REBT both side treated film is specially designed to be used as outside web of laminates as alternative to BOPET

| PROPERTIES | | VALUE | UNIT | TEST METHOD |
|---|---|---|---|---|
| **Thickness** | | **20** | micron | DIN EN ISO 2286- 1/2/3 |
| **Grammage** | | **18,20** | g/m² | |
| **Yield** | | **54,95** | m²/kg | |
| **TENSILE PROPERTIES** | | | | |
| **Tensile Strength** | MD | **170** | N/mm² | ASTM D882 DIN EN ISO 527-1/3 |
| | TD | **300** | N/mm² | |
| **Elongation** | MD | **180** | % | |
| | TD | **60** | % | |
| **Secant Modulus 100%** | MD | **115** | N/mm² | |
| **Elastic Modulus 1%** | MD | **2500** | N/mm² | |
| **OPTICAL PROPERTIES** | | | | |
| **Gloss 45°** | | **80** | Gloss unit | ASTM D2457 |
| **Haze** | | **3,5** | % | ASTM D1003 |
| **THERMAL STABILITY** | | | | |
| **Shrinkage (hot air 130°C - 5')** | MD | **2,5** | % | OPMA TC4a |
| | TD | **0,5** | % | |
| **COEFFICIENT OF FRICTION** | | | | |
| **Tr A / Tr A** | dynamic | **0,25** | | ASTM D1894 DIN EN ISO 8295-04 |
| **Tr B / Tr B** | dynamic | **0,25** | | |
| **PERMEABILITY** | | | | |
| **Oxygen Transmission Rate** | 23°C-0% R.H. | **1860** | cc/(m² d atm) | ASTM D3985 |
| **Water Vapor Transmission Rate** | 37.8°C-100% R.H. | **6,5** | g/(m² d) | ASTM F1249 |
| | 23°C-85% R.H. | **1,4** | " | DIN 53122 |
| **TREATMENT** | | | | |
| **Treatment level layer A** | | **38** | dyne/cm | **IOQ 730.1.27 Softal pencil** |
| **Treatment level layer B** | | **38** | | |
| **DO NOT USE CORONA TREATMENT BEFORE PRINTING OR LAMINATION** | | | | |

**Guidelines for storage of OPP film**

No special conditions are required fort the storage of OPP films, however it is recommended that dry conditions below 30°C are employed to minimize any deterioration of film properties and surface treatment level. All OPP films should be allowed to reach operation room temperature for 24 hours before use. Films are suitable for use within 6 months from date of delivery

**Food contact**

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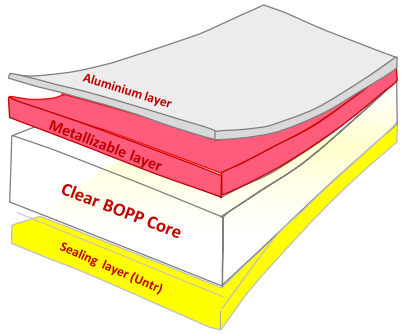
*Ed.3; rev.: 2; 30.08.2023; third emission*

# REB1.CM

## VCOAT Ultra high barrier metallized film




**Properties**

- ✓ Excellent metal adhesion
- ✓ Outstanding barrier properties (aroma, moisture and oxygen)
- ✓ Good barrier mineral oil
- ✓ Sparkling appearance
- ✓ Good printing properties
- ✓ Provide significant protection against mineral oil barrier migration, protection period more than 2 years *

**Typical Applications**

To replace alu foil in flexible packaging. Especially designed for duplex structure as sealable side and for cold seal applications. Suitable to be treated during conversion; can be applied, as intermediate layer in triplex structure.

| PROPERTIES | | VALUE | | | UNIT | TEST METHOD |
|---|---|---|---|---|---|---|
| Thickness | | 16 | 18 | 30 | micron | DIN EN ISO 2286- 1/2/3 |
| Grammage | | 14,56 | 16,38 | 27,30 | g/m² | |
| Yield | | 68,68 | 61,05 | 36,63 | m²/kg | |
| TENSILE PROPERTIES | | | | | | |
| Tensile Strength | MD | 170 | | | N/mm² | ASTM D882 DIN EN ISO 527-1/3 |
| | TD | 280 | | | N/mm² | |
| Elongation | MD | 220 | | | % | |
| | TD | 80 | | | % | |
| Secant Modulus 100% | MD | 110 | | | N/mm² | |
| Elastic Modulus 1% | MD | 1900 | | | N/mm² | |
| OPTICAL PROPERTIES | | | | | | |
| Optical density | | 2,5 | | | % | IOQ 824.18 |
| THERMAL STABILITY | | | | | | |
| Shrinkage (hot air 130°C - 5') | MD | 4 | | | % | OPMA TC4a |
| | TD | 2 | | | % | |
| SEALING PROPERTIES | | | | | | |
| Sealing Threshold | Untr/Untr | ≈ 105 | | | °C | OPMA TC4b |
| Seal Strength 130°C | Untr/Untr | ≥ 200 | | | g/cm | |
| PERMEABILITY | | | | | | |
| Oxygen Transmission Rate | 23°C-0% R.H. | 0,10 | | | cc/(m² d atm) | ASTM D3985 |
| Water Vapor Transmission Rate | 37.8°C-90% R.H. | 0,15 | | | g/(m² d) | ASTM F1249 |
| | 23°C-85% R.H. | 0,04 | | | g/(m² d) | DIN 53122 |

* under certain conditions

**Guidelines for storage of OPP film**

No special conditions are required fort the storage of OPP films, however it is recommended that dry conditions below 30°C are employed to minimize any deterioration of film properties. All OPP films should be allowed to reach operation room temperature for 24 hours before use. Coated OPP films are suitable for use within 12 months from date of delivery

**Food contact**

Vibac **REB1.CM** complies to the requirements of EEC directives and FDA regulations Specific documentation and migration test results are available upon request

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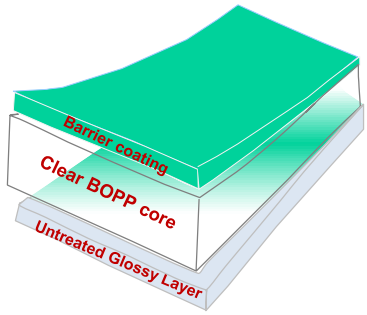
Ed.1; rev.: 5 09.06.2023; Sixth emission

# REHB.C

## VCOAT : Clear BOPP film with barrier coating




**Properties**

- ✓ Good aroma barrier
- ✓ Outstanding oxygen and mineral oil barrier properties
- ✓ Printable on barrier coating
- ✓ Outstanding optical properties
- ✓ To be used in laminated structure to replace clear barrier film
- ✓ Provide significant protection against mineral oil barrier migration, protection period more than 2 years *

**Typical Applications**

Barrier coating needs to be protected from humidity. The film is suitable for outside layer in duplex structure.

| PROPERTIES | | VALUE | UNIT | TEST METHOD |
|---|---|---|---|---|
| **Thickness** | | **20** | micron | DIN EN ISO 2286- 1/2/3 |
| **Grammage** | | **18,20** | g/m² | |
| **Yield** | | **54,95** | m²/kg | |
| **TENSILE PROPERTIES** | | | | |
| **Tensile Strength** | **MD** | **160** | N/mm² | ASTM D882 DIN EN ISO 527-1/3 |
| | **TD** | **290** | N/mm² | |
| **Elongation** | **MD** | **210** | % | |
| | **TD** | **70** | % | |
| **Secant Modulus 100%** | **MD** | **110** | N/mm² | |
| **Elastic Modulus 1%** | **MD** | **1900** | N/mm² | |
| **OPTICAL PROPERTIES** | | | | |
| **Gloss 45°** | | **85** | Gloss Unit | ASTM D2457 |
| **Haze** | | **1,4** | % | ASTM D1003 |
| **THERMAL STABILITY** | | | | |
| **Shrinkage (hot air 130°C - 5')** | **MD** | **2,5** | % | OPMA TC4a |
| | **TD** | **0,5** | % | |
| **COEFFICIENT OF FRICTION** | | | | |
| **Untr / Untr** | **dynamic** | **0,30** | | ASTM D1894 |
| **Untr/ Met** | **dynamic** | **0,20** | | DIN EN ISO 8295-04 |
| **PERMEABILITY** | | | | |
| **Oxygen Transmission Rate** | **23°C-0% R.H.** | **1** | cc/(m² d atm) | ASTM D3985 |
| **Water Vapor Transmission Rate** | **37.8°C-90% R.H.** | **5,0** | g/(m² d) | ASTM F1249 |
| | **23°C-85% R.H.** | **1,1** | g/(m² d) | DIN 53122 |

* under certain conditions

**Guidelines for storage of OPP film**

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**Food contact**

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Ed.3; rev.: 1; 16.05.2023; second emission

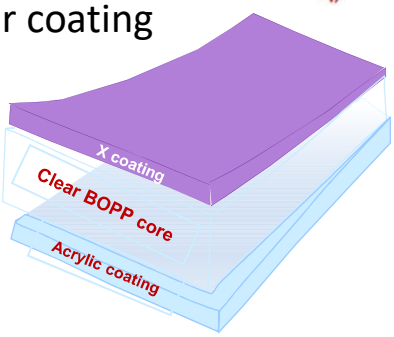
# XA.C

PRO-TEX MOSH/MOAH PROTECTOR

Chlorine free

VIBAC

VCOAT : Clear BOPP film, Acrylic/High barrier coating




## Properties

- ✓ PVdC Free
- ✓ Excellent WV, Oxygen & Aroma barriers
- ✓ Excellent seal strength on Acr/Acr and Acr/X combination
- ✓ Outstanding optical properties
- ✓ X coating printable properties in line with acrylic coating
- ✓ Provide significant protection against mineral oil barrier migration, protection period more than 3 years*

## Typical Applications

This film is designed for use in HFFS & VFFS flexible packaging, as well as in Overwrapping applications

| PROPERTIES | | VALUE | | | | | UNIT | TEST METHOD |
|---|---|---|---|---|---|---|---|---|
| **Thickness** | | **21** | **26** | **32** | **42** | **47** | micron | DIN EN ISO 2286- 1/2/3 |
| **Grammage** | | **19,32** | **23,92** | **29,44** | **38,64** | **43,24** | g/m² | |
| **Yield** | | **51,76** | **41,81** | **33,97** | **25,88** | **23,13** | m²/kg | |
| **TENSILE PROPERTIES** | | | | | | | | |
| **Tensile Strength** | MD | **160** | | | | | N/mm² | ASTM D882 DIN EN ISO 527-1/3 |
| | TD | **280** | | | | | N/mm² | |
| **Elongation** | MD | **250** | | | | | % | |
| | TD | **90** | | | | | % | |
| **Secant Modulus 100%** | MD | **85** | | | | | N/mm² | |
| **Elastic Modulus 1%** | MD | **2700** | | | | | N/mm² | |
| **OPTICAL PROPERTIES** | | | | | | | | |
| **Gloss 45°** | | **98** | | | | | Gloss Unit | ASTM D2457 |
| **Haze** | | **2,0** | | **2,2** | **2,4** | **2,6** | % | ASTM D1003 |
| **THERMAL STABILITY** | | | | | | | | |
| **Shrinkage (hot air 130°C - 5')** | MD | **4** | | | | | % | OPMA TC4a |
| | TD | **2** | | | | | % | |
| **SEALING PROPERTIES** | | | | | | | | |
| **Sealing threshold** | Acr/Acr | **≈ 90** | | | | | °C | OPMA TC4b |
| **Seal strength 130 °C** | Acr/Acr | **≥ 200** | | | | | g/cm | |
| | X / Acr | **≥ 200** | | | | | g/cm | |
| **COEFFICIENT OF FRICTION** | | | | | | | | |
| **Acr/Acr** | dynamic | **0,25** | | | | | | ASTM D1894 DIN EN ISO 8295-04 |
| **Acr/Met** | dynamic | **0,20** | | | | | | |
| **X/X** | dynamic | **0,30** | | | | | | |
| **X/met** | dynamic | **0,25** | | | | | | |
| **PERMEABILITY** | | | | | | | | |
| **Oxygen Transmission Rate** | 23°C-0% R.H. | **10** | | | | | cc/(m² d atm) | ASTM D3985 |
| **Water Vapor Transmission Rate** | 37.8°C-90% R.H. | **4** | **3,5** | **3** | **2,5** | **2,2** | g/(m² d) | ASTM F1249 |
| | 23°C-85% R.H. | **0,85** | **0,75** | **0,65** | **0,55** | **0,50** | g/(m² d) | DIN 53122 |

* under certain conditions

**Guidelines for storage of OPP film**

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**Food contact**

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