# Barrialox™

Transparent deposited barrier film

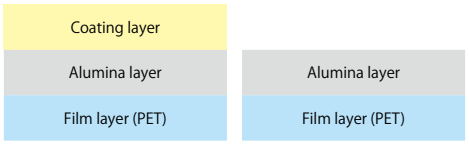
TECHNICAL DATA

(The below are representative/measured values and not guaranteed values.)

## Features

Barrialox™ is a colorless, transparent barrier film made by depositing aluminum oxide (alumina) onto PET film.

- Effectively blocks water vapor and oxygen. Stable product quality with little effect from temperature and humidity.
- Aluminum oxide is non-conductive so it can be used in microwave ovens or metal detectors for detecting foreign objects.
- No chlorine-based raw materials are used, so no chlorine compounds are present when the film is combusted.
- There are two main types, coated and non-coated, and the film is suitable for DL (dry lamination). The coated type is also suitable for printing and EL (extrusion lamination).
- Choose from a wide range of performance types, from medium barrier to high barrier, dry goods to retortable, anti-static, etc.




Coated type　　Non-coated type

| General Properties | | | | Barrialox™ Coated Type | | | | | Barrialox™ Non-Coated Type | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Retort | Dry Goods | Retort | High-BarrierRetort | Dry Goods | Dry Goods to Retort | |
| Item | | Reference Standards | Unit | 1011 HGCR HGCX | 1011 HGCW HGCA | 1011 CXR | 1011 SBR2 | 1011 EGC1 | 1011 HG | 1031 HG |
| Printable Deposited/Coated Surface | | | | Yes | Yes | Yes | Yes | Yes | No | No |
| Corona-Treated Film Surface | | | | No | No | No | No | No | No | Yes |
| Suitable for Retort ≤ 121° C x 30 Minutes | | | | Yes | No | Yes | Yes | No | Yes | Yes |
| Suitable for Retort ≤ 130° C x 40 Minutes | | | | No | No | No | Yes | No | No | No |
| Suitable for DL | | | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Suitable for EL | | | | Yes | Yes | Yes | Yes | Yes | No | No |
| FDA 21CFR 177.1630 Compliant | | | | Yes (HGCX) | Yes (HGCA) | Yes | Yes | Yes | Yes | Yes |
| EU directive 10/2011/EC compliant | | | | Yes (HGCR) | — | Yes | Yes | — | Yes | Yes |
| Thickness | | | Micron | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Tensile Strength | MD<br>TD | JIS C2318 | MPa | 220<br>250 | 220<br>250 | 220<br>250 | 270<br>220 | 220<br>250 | 220<br>250 | 220<br>250 |
| Tensile Elongation | MD<br>TD | JIS C2318 | % | 140<br>120 | 140<br>120 | 140<br>120 | 160<br>170 | 140<br>120 | 140<br>120 | 140<br>120 |
| Young's Modulus | MD<br>TD | JIS C2318 | MPa | 4600<br>5100 | 4600<br>5100 | 4600<br>5100 | 4700<br>4800 | 4600<br>5100 | 4600<br>5100 | 4600<br>5100 |
| Haze | | JIS K7361 | % | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Total Transmittance | | JIS K7136 | % | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| Wetting Tension | Alox surface or Coating surface | JIS K6768 | mN/m | 46 | 52 | 44 | 44 | 52 | 52 | 52 |
| O2TR @ 23° C x 90% RH | Representative value | JIS K7126-2 | cc/m$^2$/day | 1.5 | 0.6 | 0.2 | 0.1 | 0.2 | 1.5 | 1.5 |
| WVTR @ 40° C x 90% RH | Representative value | JIS K7129-2 | g/m$^2$/day | 1.5 | 1.0 | 0.7 | 0.3 | 0.3 | 1.5 | 1.5 |

| Suitable for Retort | Initial | | 121° C x 30 minutes | | 130° C x 110 minutes | | 135° C x 30 minutes | |
|---|---|---|---|---|---|---|---|---|
| | O2TR | WVTR | O2TR | WVTR | O2TR | WVTR | O2TR | WVTR |
| 1011 HGCR/HGCX | 1.0 | 1.0 | 1.5 | 1.5 | — | — | — | — |
| 1011 CXR | 0.1 | 0.3 | 0.2 | 0.4 | — | — | — | — |
| 1011 SBR2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.4 | 0.1 | 0.3 |

Composition：12mic "BARRIALOX"// DL // 15mic ONY // DL // 60mic RCPP O 2 T R：23'C x 90% RH
W V T R：40'C x 90% RH
Retort processing：hot-water-tank type

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