

## Oppalyte™ 33ICE

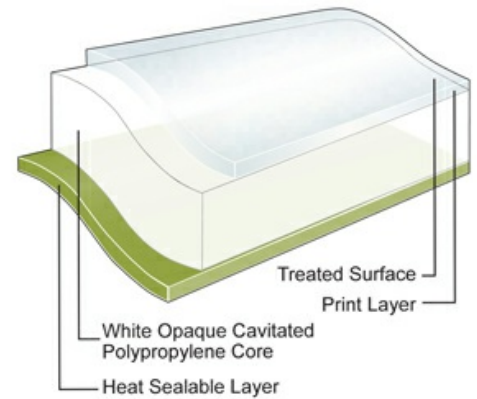
### Oriented Polypropylene Film

#### Product Description

OPPalyte 33ICE coextruded white opaque, low density, biaxially oriented polypropylene film. This film is designed for the ice cream applications, and is suitable for heat seal and cold seal on HFFS s.

#### Key Features

- High yield
- White opaque background and reduced show-through
- High COF inside to optimize efficiency for heat seal applications.
- Well adapted to cold seal process
- Treated layer must be varnished to ensure good runnability on HFFS machine



#### General

##### Availability

- ✓ Africa & Middle East
- ✓ Asia Pacific
- ✓ Europe

##### Features

- ✓ In Lamination Lap Sealable
- ✓ Light Barrier

##### Applications

- ✓ Frozen Food
- ✓ Ice Cream

##### Uses

- ✓ HFFS Flexible Packaging

##### Appearance

- ✓ White

##### Processing Method

- ✓ Cold Seal Adhesive
- ✓ Outer Web Adhesive Lamination
- ✓ Solvent Flexographic Printing
- ✓ Solvent Rotogravure Printing
- ✓ Surface Print Unsupported

##### Revision date

- ✓ October 10, 2013

## Properties

Property	Typical Value	Unit	Test Based On
Yield	48.8	m <sup>2</sup> /kg	Internal Method
Unit Weight	20.5	g/m <sup>2</sup>	Internal Method
Film Thickness	33	μ	Internal Method
Gloss(45°)	75		Internal Method
Light Transmission	24.0	%	Internal Method
Tensile Strength at Break <i>200 mm/min pull rate, 120 mm jaw separation</i>			
MD	100	Mpa	Internal Method
TD	155	Mpa	Internal Method
Elongation at Break <i>200 mm/min pull rate, 120 mm jaw separation</i>			
MD	140	%	Internal Method
TD	50	%	Internal Method
Dimensional Stability 135°C / 275°F, 7 min			
MD	-6.0	%	Internal Method
TD	-6.0	%	Internal Method
Elastic Modulus			
MD	1300	Mpa	Internal Method
TD	2100	Mpa	Internal Method
Seal Strength (Otto Brügger) 130°C, 0.3 Mpa, 0.2 sec			
	300	g/2.5 cm	Internal Method
Heat Seal Range 0.250 Mpa, 0.2 sec			
	30	°C	Internal Method

## Legal Statement

Contact your Jindal Films Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB). This product is not intended for use in medical applications and should not be used in any such applications.

## Processing Statement

- Standard reel winding: Treated side outside

## Footnotes

1. Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete country availability.

Typical properties: these are not to be construed as specifications.

© 2013 Jindal Films. Jindal Films, the Jindal Films logo, and other product or service names used herein are trademarks of Jindal Films, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without Jindal Films' prior written authorization. To the extent Jindal Films authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to, or reproduce it in whole or in part on, a website. Jindal Films does not guarantee the typical (or other) values. Any data included herein is based upon analysis of representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee the accuracy, reliability, or completeness of this information; nor do we warrant, expressly or impliedly, the merchantability, fitness for a particular purpose, freedom from patent infringement, or suitability of the products, materials or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of, or related to, anyone using or relying on any of the information in this document. This document is not an endorsement of any non-Jindal Films' product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "Jindal Films" and "Jindal" are each used for convenience, and may include Films Americas LLC, Jindal Films Americas LLC, Films Europe S.A.R.L. or any companies affiliated with them in the production and sale of film products. There are a number of such affiliated companies, many with names including "Jindal" or "Film". Neither the use of these terms of convenience, nor anything else in this document, is intended to override or supersede the legal separateness of those affiliated companies and responsibility for local action and accountability remains with them.