

# PRODUCT DATA SHEET

MFR 4  
Density 938 **ETILINAS LL 3840UA**

## Linear Medium Density Polyethylene for Rotational Moulding Applications

### DESCRIPTION

**ETILINAS LL 3840UA** is a ultra-violet (UV) light stabilized (UV14 grating) linear medium density grade with narrow molecular weight distribution, supplied in pellet form for use as a rotational moulding grade. ETILINAS LL3840UA meets the U.S. Food and Drug Administration (FDA) criteria for form contact use as specified in CFR 177.1520 (c) 3.1a & 3.2a and CFR 178.2010 and Commission Regulation (EU) No. 10/2011.

### CHARACTERISTICS include:

- Higher productivity
- Broader processing window
- Energy saving
- Enhances impact properties and ductility
- UV stabilized (UV14 grating)
- Improves colour

### APPLICATIONS include:

- Rotational moulded items
- Injection moulded items

Product Properties*	Test Method	Units	Value
<b>General Properties</b>			
Melt Flow Rate	ISO 1133 @ 190°C, 2.16kg	g/10min	4.0
Nominal Density	ISO 1183	kg/m <sup>3</sup>	938
Melting Point	ISO 3146	°C	124
Crystallization Point	ISO 3146	°C	111
<b>Mechanical Properties</b>			
Tensile Strength at Yield	ASTM D 638, 50mm/min type 4	MPa	21
Tensile Strength at Break	ASTM D 638, 50mm/min type 4	MPa	18
Elongation at Break	ASTM D 638, 50mm/min type 4	%	800
Flexural Modulus	ASTM D 790, 2mm/min	MPa	800
Charpy Impact Strength	ISO 179, type 1, Notch A	kJ/m <sup>2</sup>	12
Surface Hardness	ASTM D 2240 @ 23°C	Shore D	60
Heat Deflection Temperature	ASTM D 648, Method B	°C	70
Vicat Softening Temperature	ASTM D 1525 (Load: 1 kg; Heating rate: 50°C/hr)	°C	120
ESCR, Cond. B, F <sub>50</sub>	ASTM D 1693, 100% Igepal	hrs	300

\*The physical properties shown are typical values obtained by averaging a number of test results and small divergence from quoted figures may occur.

### Typical Processing Conditions

Processing temperature of ETILINAS LL3840UA in the range of from 200°C~300°C depending on the mould material, wall thickness and material weight.

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### SPECIFICATIONS

ETILINAS LL 3840UA complies with the following specification when processed using good extrusion practice:-

- FDA Regulation 21 CFR 177.1520.
- Commission Regulation (EU) No. 10/2011.
- HALAL certified, JAKIM/(S)/(22.00)/492/2/1 011-03/2011.

### AVAILABILITY

ETILINAS LL 3840UA are available in 25kg bag and bulk bag. The product type and batch number are clearly marked on each bag.

### STORAGE/HANDLING

ETILINAS LL 3840UA should be properly stored in well ventilated environment at a temperature of below 50°C. Prolonged or improper storage can result in deterioration of product properties. The PETRONAS Chemicals Safety Data Sheet (SDS) contains important safety information and should be viewed before using the product.

### HEALTH & SAFETY

ETILINAS LL 3840UA is not classified as a dangerous preparation. Please refer to our Safety Data Sheet (SDS) for details on various aspects of safety, recovery and disposal of the product.

### PRODUCT STEWARDSHIP

PCGB has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. Our Product Stewardship program rests with each and every individual involved with PCGB's products– from the initial concept and research, to manufacture, use, sale and disposal of each product.

### RELATED DOCUMENTS

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

Safety Data Sheet (SDS)  
Statement on chemicals, regulations and standards  
Statement on compliance to food contact regulations

### FOR MORE INFORMATION

Please contact **PETRONAS Chemicals Group Berhad (PCGB)**, Level 15, Tower 1, PETRONAS TWIN TOWER, KLCC, 50088 KUALA LUMPUR, MALAYSIA.

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