

PE-HMW
TECHNICAL DATA SHEET

FULL NAME: HIGH MOLECULAR WEIGHT POLYETHYLENE

| PROPERTIES | TEST METHOD | UNIT | NATURAL / BLACK | COLOUR |
|---------------------------|---------------------|-------------------|-----------------|--------|
| DESCRIPTION | DIN EN ISO 1043-1 | - | PE-HMW | PE-HMW |
| SPECIFIC GRAVITY | DIN EN ISO 1183-1 | G/CM ³ | ≥ 0,95 | ≥ 0,95 |
| MEAN MOLECULAR WEIGHT | VISCOMETRY ANALYSIS | MIO. G/MOL | ~ 0,5 | ~ 0,5 |
| WATER ABSORPTION AT 23° C | DIN EN ISO 62 | % | < 0,01 | < 0,01 |

**MECHANICAL PROPERTIES AT STANDARD ATMOSPHERE –
DIN EN ISO 291 – 23/50**

| | | | | |
|---------------------------------|------------------|-------------------|---------|---------|
| ABRASION (SAND SLURRY TEST) | DIN EN ISO 15527 | % | 350 | 350 |
| YIELD STRESS | DIN EN ISO 527-1 | MPA | ≥ 20 | ≥ 20 |
| MODULUS OF ELASTICITY (TENSILE) | DIN EN ISO 527-1 | MPA | >1100 | >1100 |
| IMPACT STRENGTH – CHARPY | DIN EN ISO 179-1 | KJ/M ² | ≥ 25 | ≥ 25 |
| SHORE – HARDNESS D | DIN EN ISO 868 | - | 60 – 65 | 60 – 65 |

THERMAL PROPERTIES

| | | | | |
|---|-------------------------|-----------|-----------------------|-----------------------|
| THERMAL CONDUCTIVITY AT 23°C | ISO 52612 | W / M X K | 0,40 | 0,40 |
| COEFFICIENT OF EXPANSION (BETWEEN 23°C – 80°C) | ISO 1135-2 | M / K X M | 20x10 ⁻⁵ | 20x10 ⁻⁵ |
| OPERATING TEMPERATURE | SHORT TERM LONG TERM | °C °C | ~ 100 ~ -100 / +80 | ~ 100 ~ -100 / +80 |
| MELTING TEMPERATURE | ISO 11357-3 | °C | 135 | 135 |
| FLAMMABILITY ACC. TO UL94 – TEST THICKNESS 3/6 MM | - | - | HB | HB |

**ELECTRICAL PROPERTIES AT STANDARD ATMOSPHERE –
DIN EN ISO 291 – 23/50**

| | | | | |
|-----------------------|-------------------|--------|-------------------|-------------------|
| DIELECTRIC STRENGTH | IEC 60243-1 | KV/MM | 45 | 45 |
| INSULATION RESISTANCE | DIN EN 62631 -3-1 | Ω X CM | >10 ¹² | >10 ¹² |
| SURFACE RESISTANCE | DIN EN 62631 -3-1 | Ω | >10 ¹² | >10 ¹² |

| REV. | DATE | DESCRIPTION | MODIFIED PARAGRAPHS | WRITTEN BY | APPROVED BY |
|------|---------|---------------|---------------------|------------|-------------|
| 01 | 12/2020 | LAYOUT UPDATE | // | 602.18 | 602.18 |

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THIS DATASHEET AND ALL PROPRIETIES INDICATED COME DIRECTLY FROM THE PRODUCER'S STUDIES AND TESTS. D.H. LAMINA S.R.L. DOES NOT PRODUCE THE MATERIAL.

THE CONTENTS OF THIS DATASHEETS ARE MEANT TO GIVE AN OVERVIEW OF THE PRODUCT'S PROPRIETIES. IT REFLECTS OUR CURRENT KNOWLEDGE AND MAY NOT BE COMPLETE. THE VALUES SHOULD BE TAKEN AS GUIDE VALUES BECAUSE THEY ARE DEPENDENT ON SURROUNDING CONDITIONS AND MACHINING METHODS. THE VALUES ARE IN NO WAY A LEGALLY BINDING ASSURANCE OF THE PRODUCT'S PROPRIETIES OR ITS SUITABILITY FOR USE IN A SPECIFIC APPLICATION. ALL STATED VALUES ARE AVERAGE ESTABLISHED FROM MANY INDIVIDUAL TESTS. FOR SPECIFIC APPLICATIONS, WE RECOMMEND DETERMINING SUITABILITY BY MEANS A TRIAL

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