

### Technical Data: LDPE (Low-Density Polyethylene)

#### Product Description

##### Define and Grades

##### What Is Low Density Poly-Ethylene (LDPE)?

Low-density polyethylene (LDPE) is a thermoplastic polymer known for its low density and excellent flexibility. It's widely used in injection molding for producing flexible and lightweight plastic parts, including packaging materials, toys, and medical devices.

Common grades of LDPE that Neway used for injection molding include:

- LDPE 2420
- LDPE 1020
- LDPE 4020
- LDPE 5820
- LDPE 7020



#### Features and Applications

Grade	Features	Applications
LDPE 2420	High flexibility, good electrical insulator.	Plastic bags, packaging materials.
LDPE 1020	Excellent chemical resistance impact strength.	Laboratory equipment, chemical tanks.
LDPE 4020	Balanced stiffness and flexibility, easy to process.	Toys, medical devices, squeeze bottles.
LDPE 5820	High tensile strength abrasion resistance.	Automotive components, tubing.
LDPE 7020	Superior impact resistance toughness.	Garbage cans, industrial containers.

#### Physical and Mechanical

Property	Density	Tensile Strength	Tensile Elongation	Flexural Modulus	Flexural Strength	Izod Impact Strength	Heat Deflection Temp.	Shrinkage	Hardness
Units	(g/cm <sup>3</sup> )	(Mpa)	(%)	(MPa)	(MPa)	(J/m)	(°C)	(%)	(Shore D)
LDPE 2420	0.922	8.5	300	130	12	30	60	1.5	50
LDPE 1020	0.923	9	350	140	12.5	35	65	1.4	52
LDPE 4020	0.924	9.5	400	150	13	40	70	1.3	54
LDPE 5820	0.925	10	450	160	13.5	45	75	1.2	56
LDPE 7020	0.926	10.5	500	170	14	50	80	1.1	58

#### Note

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | [www.newayprecision.com](http://www.newayprecision.com) | Contact Neway



# LDPE Injection Molding

Low-Density Polyethylene

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### Benefits of Material Grades

#### LDPE 2420

1. Flexibility: LDPE 2420 is known for its high flexibility, making it suitable for applications where the material needs to bend and deform without breaking.
2. Impact Resistance: It exhibits excellent impact resistance, crucial in applications where the material may experience sudden shocks or impacts.
3. Low Density: LDPE 2420 is low, making it lightweight and ideal for applications where weight is a concern.
4. Applications: Commonly used for producing flexible packaging materials such as plastic bags, shrink wrap, and various types of containers.



#### LDPE 1020



1. Transparency: LDPE 1020 is known for its transparency, making it suitable for applications with a desired transparent or translucent appearance.
2. Chemical Resistance: It offers good resistance to chemicals, making it a choice for chemical storage containers.
3. Ease of Processing: LDPE 1020 is easy to process, making it ideal for blow molding or film extrusion applications.
4. Applications: Used for clear food packaging, laboratory equipment, and disposable gloves.

#### LDPE 4020

1. High Tensile Strength: LDPE 4020 possesses higher tensile strength, making it suitable for more structural integrity applications.
2. Abrasion Resistance: It offers good resistance to abrasion, making it suitable for applications where the material might come into contact with abrasive surfaces.
3. Ductility: LDPE 4020 exhibits excellent flexibility, making it a choice for products that need to be stretched or bent.
4. Applications: Commonly used for manufacturing hoses, industrial liners, and agricultural films.



#### LDPE 5820



1. High Impact Strength: LDPE 5820 has superior impact strength, making it ideal for applications where the material must withstand
2. UV Resistance: It offers good resistance to UV radiation, making it suitable for outdoor applications requiring long-term sunlight exposure.
3. Low Shrinkage: LDPE 5820 exhibits low shrinkage during cooling, ensuring accurate and dimensionally stable parts.
4. Applications: Used for playground equipment, outdoor furniture, and automotive interior components.

#### LDPE 7020

1. High Impact Strength: LDPE 5820 has superior impact strength, making it ideal for applications where the material must withstand
2. UV Resistance: It offers good resistance to UV radiation, making it suitable for outdoor applications requiring long-term sunlight exposure.
3. Low Shrinkage: LDPE 5820 exhibits low shrinkage during cooling, ensuring accurate and dimensionally stable parts.
4. Applications: Used for playground equipment, outdoor furniture, and automotive interior components.



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