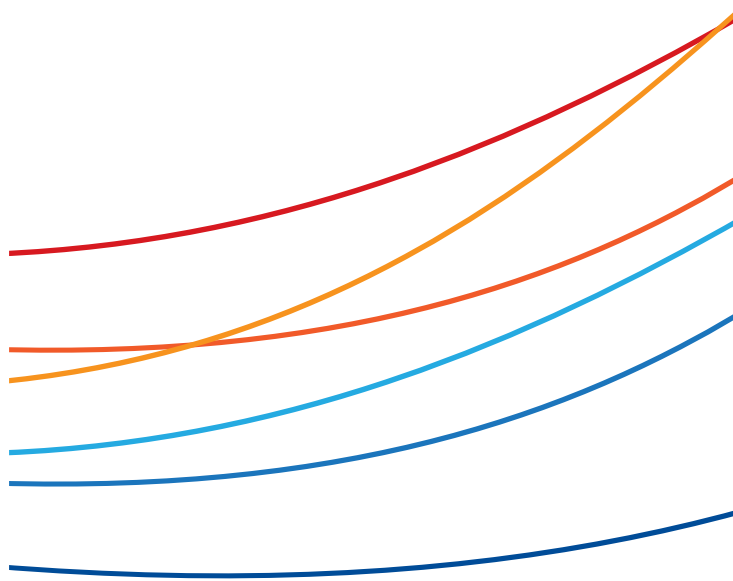


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# LLDPE Products

## Product Capacity of LLDPE plant

GRADES	PROPERTY	MFR (190°C/2.16 kg)	Density	
	UNIT	(g/10 min).	g/l	
	ASTM METHOD	D 1238	D 1505	
	INTERNAL METHOD	17066	17004	
<b>1- LLDPE Butene</b>				
235F7	Lamination	0.70 ± 0.1	922 - 925	
16501	Liner	0.95 ± 0.1	918 ± 2	
Available >	22502/ AA/ 22502 KJ	General Purpose	1.80 ± 0.2	923 ± 1
Available >	22501/ AA/ 22501 KJ	High Stiffness	0.95 ± 0.1	923 ± 1
16502	Cast & general Purpose	2.00 ± 0.2	918 ± 2	
16503	Cast	3.00 ± 0.3	916 - 919	
<b>2- Terpolymer - HP-LLDPE SPECIALITY PRODUCTS</b>				
12XF6	High Performance	0.60 ± 0.10	914 ± 2	
12HF6	Shrink	0.6	914 ± 2	
14ZF8	Easy Processability	0.75 ± 0.10	914 - 917	
14XF9	Lamination	0.90 ± 0.10	914 - 917	
12X01	Superbutene	0.95 ± 0.10	914 ± 2	
14X01	High Stiffness	0.95 ± 0.10	915 ± 1	
11X02	General Purpose	2.00 ± 0.20	912 ± 1	
09X02	Stretch cast	2.20 ± 0.20	910 ± 1	
20X02	Bread bags	2.50 ± 0.20	921 ± 1	
Available >	18XF5 N	High performance	0.50 ± 0.10	920 ± 2
<b>3- Quattropolymer" HP-LLDPE SPECIALITY PRODUCTS (HP HEXENE TYPE)</b>				
18YF3	Shrink film, high perform.	0.30 ± 0.05	918 - 921	
18YF5	High Stiffness/ Shrink	0.55 ± 0.10	918 - 921	
12YF6	Liner	0.60 ± 0.10	914 ± 2	
15YF6	Heavy duty	0.60 ± 0.10	916 ± 1	
11YF6	Lamination high clarity	0.60 ± 0.10	911 - 914	
14Y01	Thin film	1.00 ± 0.10	915 ± 1	
10Y02	High Pre-Stretch cast	2.20 ± 0.20	911 ± 1	
<b>4- VLDPE (butene) film grades SPECIALITY GRADES</b>				
10501	Lamination	2.50 ± 0.30	911 ± 1	
10502	Cast- Co-extrusion(*)	2.50 ± 0.30	911 ± 1	

(\*) This product is used as adhesive layer in a multilayer co-extruded film.

## Product Capacity of LLDPE plant

GRADES	PROPERTY	MFR (190°C/2.16 kg)	Density		
	UNIT	(g/10 min).	g/l		
	ASTM METHOD	D 1238	D 1505		
	INTERNAL METHOD	17066	17004		
<b>5- HP-VLDPE SPECIALITY PRODUCTS</b>					
01X01	Co-extrusion	0.90 ± 0.10	902 ± 1		
02X02	Geomembranes, Bumpers, Soft Nets	1.80 ± 0.20	903 ± 1		
<b>6- HDPE - Medium MWD - Stretched</b>					
<b>Available &gt;</b>	<b>Jamlene HD-5000s</b>	<b>Monofilament</b>	<b>0.80 ± 0.10</b>	<b>954 ± 1</b>	<b>New</b>
	424F5	Raffia (Textile grade)	0.50 ± 0.10	942 ± 1	
	534F7	Monofilament, high tenacity	0.70 ± 0.10	953 ± 1	
	50401	Monofilament	1.00 ± 0.10	950 ± 2	
<b>7- HP-HDPE (@) SPECIALITY PRODUCTS</b>					
	36XF6	Raffia for ropes	0.60 ± 0.10	936 ± 1	
	43X01	Monofilament	1.00 ± 0.10	943 ± 1	
	41X01	Cast flat yarn (Raffia)	1.20 ± 0.10	941 ± 1	
<b>8- HDPE Narrow MWD - Homopolymer injection moulding grades</b>					
<b>Available &gt;</b>	<b>60505 / 60505 UV</b>	<b>Crates</b>	<b>5.50 ± 1.00</b>	<b>958 ± 2</b>	
<b>Available &gt;</b>	<b>60507 / 60507 UV</b>	<b>Crates</b>	<b>7.50 ± 1.00</b>	<b>958 ± 2</b>	
<b>Available &gt;</b>	<b>60511 / 60511 UV</b>	<b>Houseware</b>	<b>11.00 ± 2.00</b>	<b>958 ± 2</b>	
	60518	Fast cycle	18.00 ± 2.00	958 ± 2	
	60535	Thin walled	35.00 ± 5.00	958 ± 2	
<b>9- HDPE Narrow MWD - Copolymer injection moulding grades</b>					
<b>Available &gt;</b>	<b>CC 52501</b>	<b>Caps and closures (CSD)</b>	<b>0.90 ± 0.10</b>	<b>952 ± 2</b>	<b>New</b>
<b>Available &gt;</b>	<b>CC 52502</b>	<b>Caps and closures (Mineral water, CSD)</b>	<b>2.00 ± 0.10</b>	<b>952 ± 2</b>	<b>New</b>
<b>Available &gt;</b>	<b>CC 52502SU</b>	<b>Caps and closures (CSD)</b>	<b>2.00 ± 0.10</b>	<b>952 ± 2</b>	<b>New</b>
<b>Available &gt;</b>	<b>52505 / 52505 UV</b>	<b>Containers</b>	<b>5.00 ± 1.00</b>	<b>952 ± 2</b>	
<b>Available &gt;</b>	<b>52511 / 52611 UV</b>	<b>Houseware</b>	<b>11.00 ± 2.00</b>	<b>952 ± 2</b>	
<b>Available &gt;</b>	<b>52518</b>	<b>Houseware, High fluidity</b>	<b>18.00 ± 2.00</b>	<b>952 ± 2</b>	
	52528	Caps, Thin walled	28.00 ± 4.00	952 ± 2	
<b>10- LLDPE (butene) Injection moulding grades</b>					
	20505	General purpose	5.00 ± 1.00	922 ± 1	
	20516	General purpose	16.00 ± 2.00	922 ± 1	
	25525	Lids	25.00 ± 3.00	925 ± 1	
	26560	Fast Cycle	60.00 ± 5.00	926 ± 1	

## Product Capacity of LLDPE plant

GRADES	PROPERTY	MFR (190°C/2.16 kg)	Density
	UNIT	(g/10 min).	g/l
	ASTM METHOD	D 1238	D 1505
	INTERNAL METHOD	17066	17004
<b>11- LLDPE (butene) Extrusion coating</b>			
23507	Extrusion coating	7.00 ± 1.00	923 ± 1
<b>12- LLDPE Rotomoulding</b>			
Available > 32604 UV	Rotomoulding, high-ESCR	4.00 ± 1.00	932 ± 1
30505 UV	Rotomoulding, high-ESCR	5.00 ± 1.00	930 ± 1
Available > 38504 UV	Rotomoulding, high-ESCR	4.00 ± 1.00	938 ± 2
32505 UV	Rotomoulding, high-ESCR	5	932
<b>13- HP LLDPE SPECIALTTY PRODUCTS</b>			
30Y04	Rotomoulding & Stiff Cast	4.00 ± 1.00	930 ± 1
<b>14- BWMD HDPE for Blow moulding</b>			
526F1BX(*)	Blow moulding containers, high impact	0.12	952
526F2BX	Blow moulding small containers, high ESCR	0.25	952
524F2(*)	Blow moulding small containers	0.25	952
<b>15- BWMD HDPE for pipes</b>			
486H2(*)	Pipes	0.2 <sup>(1)</sup>	948
<b>16- BWMD HDPE for Blown film</b>			
526H1(*)	Blow film, high Stiffness	0.15 <sup>(1)</sup>	952
486H2(*)	Blow film, high mechanicals	0.25 <sup>(1)</sup>	948
524H1FX(*)	Blow film, high Stiffness	0.15 <sup>(1)</sup>	952
484H2(*)	Blow film, general purposes	0.25 <sup>(1)</sup>	948

(\*) Grade under final development, to be Industrialised.

(1) Melt Flow rate (190° C/5kg).

➤ **LLDPE made via Spherilene Gas-Phase Technology**



# 22502AA/ 22502KJ

22502 is a LLDPE blown film grade designed for applications requiring ease of processing and good optical properties even at low extrusion temperature. This resin is well suited for blending with LDPE and for general purpose uses, including agricultural applications.

**LLDPE: 22502AA/22502KJ**

**Density: 0.922-0.924**

**MFI: 1.6-2**

### Characteristic Properties



- ease of processing
- good optical properties
- low extrusion temperature
- suited for blending with LDPE

### Main Applications



- Blown film grade
- General purpose
- agricultural applications.

### Additives



- 22502AA:
  - Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- 22502KJ:
  - Thermal Antioxidant (Process Stabilizer)
  - Antiblocking Agent
  - Slip Agent
  - Catalyst neutralizer (acid scavenger, lubricant)

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	ASTM Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	1.80	D1238
Density	g/ml	0.9220	D1505
<b>Film properties @</b>			
Dart Impact	(g)	67	D1709
Elmendorf Tear	(g)	MD/TD 127/332	D1922
Tensile strength at yield	(MPa)	MD/TD 12/12	D882
Tensile strength at break	(MPa)	MD/TD 37/32	D882
Ultimate elongation	(%)	MD/TD 783/888	D882
Haze	(%)	48	D1003
Gloss 45°		10	D2457
<b>@ 25 micron film obtained on Collin 25, B.u.R. 2.5: 1, Temp. profile 155 → 190°C.</b>			
<b>Recommended processing conditions</b>			
Melt Temperature	(°C)	190-230	
Blow up ratio		2.0-3.0	
Die Gap	(mm)	2.0-2.5	
Thickness	(micron)	15-150	

## Product data sheet

➤ **LLDPE made via Spherilene Gas-Phase Technology**



# 22501AA/ 22501KJ

22501 is a LLDPE blown film grade designed for applications requiring good optical properties even at low extrusion temperature. This resin combines ease of processing with low gels and it is well suited for blending with LDPE and for general purpose applications.

**LLDPE: 22501AA/22501KJ**

**Density: 0.922-0.924**

**MFI: 0.85-1.05**

### Characteristic Properties



- High stiffness
- good optical properties
- low extrusion temperature
- ease of processing
- low gels
- suited for blending with LDPE

### Main Applications



- Blown film grade
- General Purpose applications

### Additives



- 22501AA:
  - Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- 22501KJ:
  - Thermal Antioxidant (Process Stabilizer)
  - Antiblocking Agent
  - Slip Agent
  - Catalyst neutralizer (acid scavenger, lubricant)

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	ASTM Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	0.95	D1238
Density	g/ml	0.9230	D1505
<b>Film properties @</b>			
Dart Impact	(g)	70	D1709
Elmendorf Tear	(g)	MD/TD 105/436	D1922
Tensile strength at yield	(MPa)	MD/TD 11/12	D882
Tensile strength at break	(MPa)	MD/TD 41/31	D882
Ultimate elongation	(%)	MD/TD 648/780	D882
Haze	(%)	48	D1003
Gloss 45°		10	D2457
<b>@ 25 micron film obtained on Collin 25, B.u.R. 2.5: 1, Temp. profile 155 → 190°C.</b>			
<b>Recommended processing conditions</b>			
Melt Temperature	(°C)	190-230	
Blow up ratio		2.0-3.0	
Die Gap	(mm)	2.0-2.5	
Thickness	(micron)	15-150	

## Handling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

## Storage

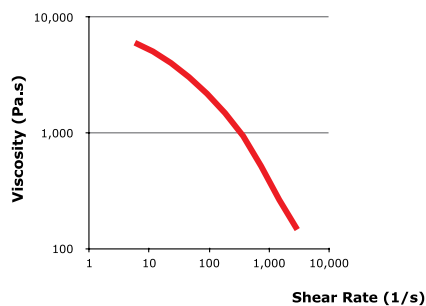
Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not responsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

## packaging

Jam Polymers Polyolefin resins are supplied in Pellet form packed in 25kg bags. Alternative packaging modes are available for selected grades.

- On compression moulded according to ASTM D1928C  
Processing Conditions  
Recommended barrel temperatures range between 190 °C and 280 °C.

Shear-Viscosity @ 190 °C



The above values were  
Calculated from data for 100 µm  
produced  
on a 75mm Barrnage  
extruder with 190°C melt tem-  
perature using a 2:1 blow ratio  
and a gap die of 3.0 mm.



## Product data sheet

➤ **HP-LLDPE made via Spherilene Gas-Phase Technology**



### HP-LL18XF5N

HP-LL18XF5 N is a terpolymer of ethylene, propylene and butene-1 for high strength application especially heavy duty shipping sacks, ice bag, frozen food bags, potato bags and agriculture films which have good sealability and excellent puncture resistance. Goods produced from this grade have outstanding toughness, excellent puncture resistance, good heat sealing behavior and excellent machinability on conversion lines. HP-LLDPE's process is easier than conventional LLDPEs and have low gel. HP-LL18XF5 N is a grade without slip additives.

**HP-LLDPE: HP-LL18XF5N**

**Density: 0.918-0.922**

**MFI: 0.4-0.6**

#### Characteristic Properties



- Excellent puncture resistance.
- Excellent machinability on conversion lines.

#### Main Applications



- T-bags and other bags, Food Packaging for frozen products, Agricultural film, Heat seal film, Food Packaging

#### Additives



- Thermal Antioxidant (Process Stabilizer)
- Catalyst neutralizer (acid scavenger, lubricant)
- Antiblocking Agent

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit		Typical Value	Test Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)		0.5	D1238
Density	g/cm <sup>3</sup>		0.918	D1505
<b>Film Properties @</b>				
Dart Impact	g		125	D 1709
Vicat Softening Point	°C		127	D1525
Tensile Strength at Yield	Mpa	(MD/TD)	11/10	D638
Tensile Strength at Break	Mpa	(MD/TD)	40/35	D638
Ultimate Elongation	%	(MD/TD)	600/750	D638
Elmendorf Tear	g	(MD/TD)	240/400	D1922
Haze	%		30	D1003
Gloss 45°			25	D2457
@ on 25 micron film obtained on Collin 25, B.u.R 2.5: 1, Temp. profile 155 → 190°C: melt 200°C				

## Handling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

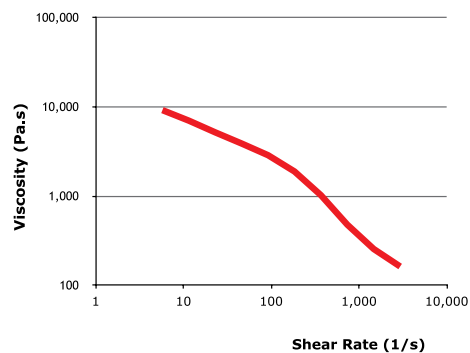
## Storage

Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not responsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

## packaging

Jam Polymers Polyolefin resins are supplied in Pellet form packed in 25kg bags. Alternative packaging modes are available for selected grades.

Shear-Viscosity @ 190 °C



The above values were Calculated from data for 100 µm produced on a 75mm Barrnage extruder with 190°C melt temperature using a 2:1 blow ratio and a gap die of 3.0 mm.

# HD-5000S

### HDPE for Monofilament



HD-5000S is a HDPE grade specially designed for monofilament applications, which combines good processability with high tenacity. This grade has good balance of mechanical strength and high production rates. HD-5000S is also well suited for multiply applications, like ropes and stretched filaments.

**Jamlene: HD5000S**

**Density: 0.954 ± 1**

**MFI: 0.8 ± 0.1**

#### Characteristic Properties



good processability with high tenacity, good balance of mechanical strength and high production rates

#### Typical Applications



- Fishing net, Rope, Agricultural net, Tarpaulin, Woven sack.

#### Additives



Antioxidants/Acid scavenger  
Antiblock/Processing aid

Resin Properties	Unit	Value	Test Method
Melt Index	g/10 min	0.8	D1238
Density	g/cm <sup>3</sup>	0.954	D1505
Thermal Properties	Unit	Value	Test Method
Vicat Softening Point	°C	125	D1525
Molded Properties	Unit	Value	Test Method
Flectural Modulus	Mpa	1100	D790
Tensile Strenght at Yield	Mpa	24	D790
Tensile Strenght at Break	Mpa	39	D638
H.D.T	°C	75	D648
Notched Izod Impact @ 23 °C	J/m	400	D256/A

- On compression molded according to ASTM D1928C

#### Processing Conditions

Recommended barrel tempratures range is between 160 °C and 190 °C

# 60505 60505UV

➤ **HDPE made via Spherilene Gas-Phase Technology**



60505 is a HDPE injection molding grade which combines high stiffness with good physical properties. This resin is well suited for crates and toys applications.

**HDPE: 60505/60505UV**

**Density: 0.956-0.960**

**MFI: 4.5-6.5**

### Characteristic Properties



- High stiffness with good physical properties.

### Main Applications



- injection molding grade
- Crates
- toys applications

### Additives



- 60505:
  - Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- 60505UV:
  - Catalyst neutralizer (acid scavenger, lubricant)
  - UV Stabilizer
  - Thermal Antioxidant (Process Stabilizer)

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	ASTM Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	5.5	D1238
Density	g/ml	0.9570	D1505
<b>Physical properties @</b>			
Flexural modulus	(MPa)	1460	D790
Notched Izod impact at 23°C	(J/m)	30	D256/A
Vicat softening point	(°C)	125	D1525
<b>@ on compression moulded specimen obtained according to ASTM D 1928°C</b>			
<b>Fabrication conditions for injection moulding</b>			
Recommended barrel temperatures range between 190 and 280°C			

## Product data sheet



HDPE made via Spherilene Gas-Phase Technology



# HD-60507 HD-60507UV

60507 is a HDPE homopolymer which is manufactured in gas phase process for injection molding grade which combines good flowability with balanced physical properties. This resin is well suited for general purpose application requiring high stiffness.

**HDPE: HD-60507/HD-60507UV**

**Density: 0.956-0.960**

**MFI: 6.5-8.5**

### Characteristic Properties



- Good flowability with balanced physical properties.

### Main Applications



- Crates  
Injection molding grade

### Additives



- HD-60507:
  - Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- HD-60507UV:
  - Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
  - UV Stabilizer

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	Test Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	7.5	D1238
Density	g/ml	0.958	D1505
Resin Properties @	Unit	Typical Value	Test Method
Vicat Softening Point	(°C)	126.5	D1525
Moulded Properties @	Unit	Typical Value	Test Method
Flexural Modulus	(MPa)	1450	D790
Notched Izod Impact @ 23 °C	(J/m)	24	D256/A

# 60511 60511UV

➤ **HDPE made via Spherilene Gas-Phase Technology**



60511 is a HDPE injection molding grade which combines excellent flowability with high stiffness. This resin is well suited for housewares and toys applications.

**HDPE: 60511/60511UV**

**Density: 0.956-0.960**

**MFI: 9-13**

### Characteristic Properties



- Excellent flowability with high stiffness.

### Main Applications



- injection molding grade
- Houseware
- toys

### Additives



- 60511:
- Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- 60511UV:
- Catalyst neutralizer (acid scavenger, lubricant)
  - UV Stabilizer
  - Thermal Antioxidant (Process Stabilizer)

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	ASTM Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	11	D1238
Density	g/ml	0.960	D1505
<b>Physical properties @</b>			
Flexural modulus	(MPa)	1450	D790
Notched Izod impact at 23°C	(J/m)	21	D256/A
Vicat softening point	(°C)	125	D1525
<b>@ on compression moulded specimen obtained according to ASTM D 1928°C</b>			
<b>Fabrication conditions for injection moulding</b>			
<b>Recommended barrel temperatures range between 190 and 280°C</b>			

## Product data sheet

### ➤ Caps and closures (CSD)



# CC52501

CC52501 is a Narrow MWD HDPE specially designed for beverage bottles of sparkling water, hot-filled and carbonated soft drinks. This grade has excellent organoleptic properties which prevent unpleasant odor and taste from cap or closure to transfer to water. It has good gas permeability characteristics, superior processability and excellent mechanical strength. HDPE CC52501 does not contain slip agent.

#### HDPE: CC52501

#### Density: 0.952 ± 2

#### MFI: 0.9 ± 0.1

#### Characteristic Properties



Narrow MWD HDPE, excellent environmental stress crack resistance and organoleptic property, good gas permeability characteristics

#### Typical Applications



- Caps and closures for beverage bottles of sparkling water, hot-filled and carbonated soft drinks.

#### Additives



Antioxidants/Acid scavenger

Resin Properties	Unit	Value	Test Method
Melt Index	g/10 min	0.9	D1238
Density	g/cm <sup>3</sup>	0.952	D1505
Thermal Properties	Unit	Value	Test Method
Vicat Softening Point	°C	123	D1525
Molded Properties	Unit	Value	Test Method
Flectural Modulus	Mpa	800	D790
Tensile Strenght at Yield	Mpa	25	D790
Tensile Strenght at Break	Mpa	36	D638
H.D.T	°C	78	D648
Notched Izod Impact @ 23 °C	J/m	80	D256/A

- On compression molded according to ASTM D1928C

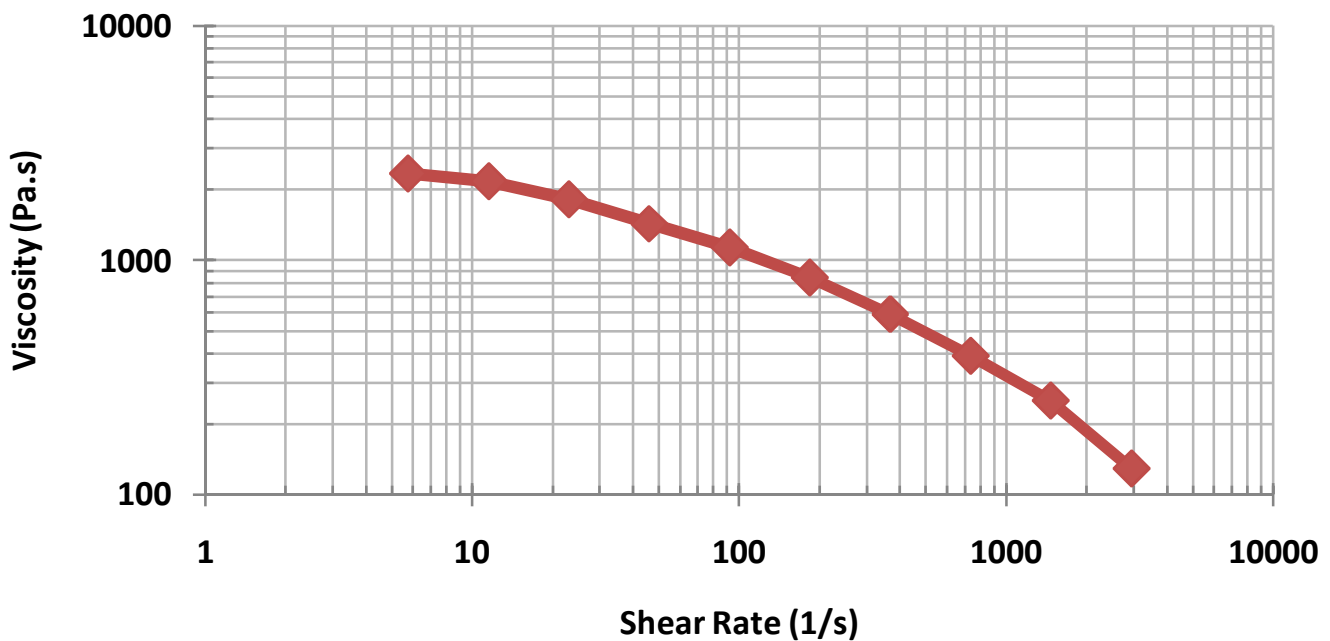
#### Processing Conditions

Recommended barrel tempratures range is between 160 °C and 190 °C

## Storage and Handling

Polyethylene products (in pelletized or powder form) should not be stored in direct sunshine and/or heat radiation. The Storage area should be dry and preferably don't exceed 50 °C. JPC would not responsible about quality diminishing such as color change, bad smell or est. which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

### Shear-Viscosity @ 190 °C



The technical information suggested uses and application presented are believed to be accurate and reliable, however JPC makes no warranties either express or implied concerning the information herein or the use of our materials.



## Product data sheet



Caps and closures (Mineral water, CSD)



# CC52502

CC52502 is a Narrow MWD HDPE specially designed for mineral water bottles and beverage caps. This grade has excellent organoleptic properties which prevent unpleasant odor and taste from cap or closure to transfer to water. It has good gas permeability characteristics, superior processability and excellent mechanical strength. HDPE CC52502 does not contain slip agent.

**HDPE: CC52502**

**Density: 0.952 ± 2**

**MFI: 2 ± 0.1**

### Characteristic Properties



Narrow MWD HDPE, excellent organoleptic property, superior processability and excellent mechanical strength, good gas permeability characteristics

### Typical Applications



- Caps and closures for mineral water bottles, Caps for sparkling water and carbonated soft drinks, beverage caps.

### Additives



Antioxidants/Acid scavenger

Resin Properties	Unit	Value	Test Method
Melt Index	g/10 min	2	D1238
Density	g/cm <sup>3</sup>	0.952	D1505
Thermal Properties	Unit	Value	Test Method
Vicat Softening Point	°C	124	D1525
Molded Properties	Unit	Value	Test Method
Flectural Modulus	Mpa	1000	D790
Tensile Strenght at Yield	Mpa	25	D790
Tensile Strenght at Break	Mpa	38	D638
H.D.T	°C	78	D648
Notched Izod Impact @ 23 °C	J/m	180	D256/A

- On compression molded according to ASTM D1928C

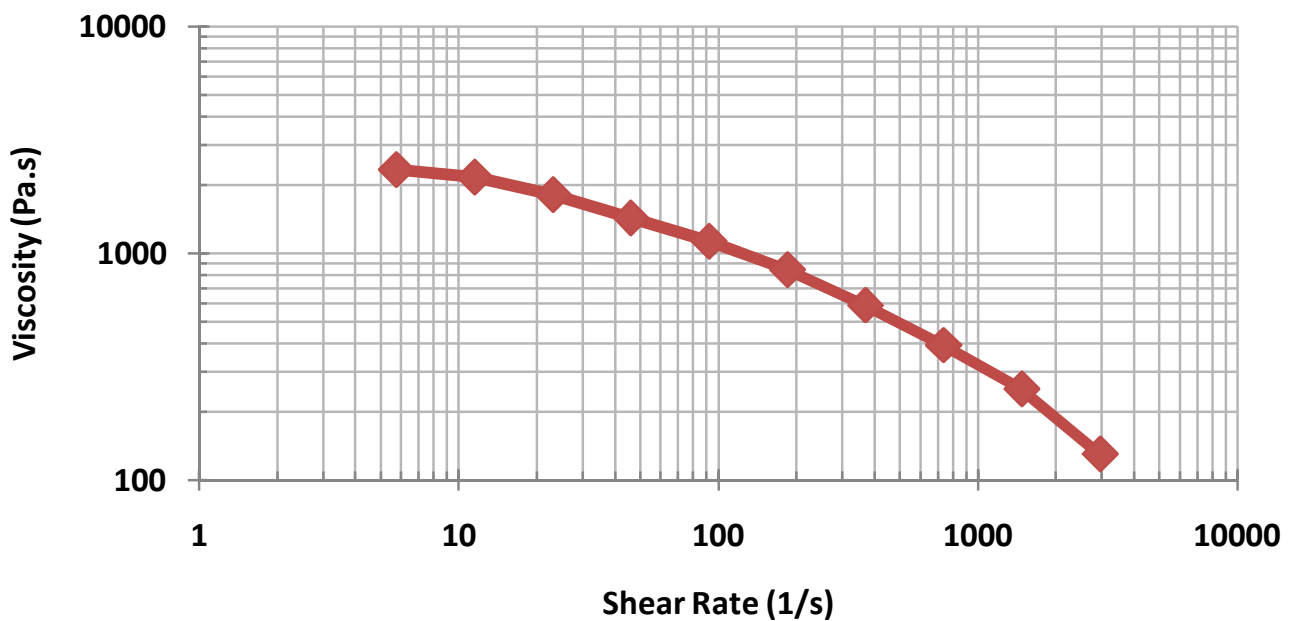
### Processing Conditions

Recommended barrel tempratures range is between 160 °C and 190 °C

## Storage and Handling

Polyethylene products (in pelletized or powder form) should not be stored in direct sunshine and/or heat radiation. The Storage area should be dry and preferably don't exceed 50 °C. JPC would not responsible about quality diminishing such as color change, bad smell or est. which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

### Shear-Viscosity @ 190 °C



The technical information suggested uses and application presented are believed to be accurate and reliable, however JPC makes no warranties either express or implied concerning the information herein or the use of our materials.

### ➤ Caps and closures (CSD)



# CC52502SU

CC52502 is a Narrow MWD HDPE specially designed for mineral water bottles and beverage caps. This grade has excellent organoleptic properties which prevent unpleasant odor and taste from cap or closure to transfer to water. It has good gas permeability characteristics, superior processability and excellent mechanical strength. HDPE CC52502SU does contain slip agent and stabilized against UV light.

**HDPE: CC52501**

**Density: 0.952 ± 2**

**MFI: 2 ± 0.1**

#### Characteristic Properties



Narrow MWD HDPE, excellent organoleptic property, superior processability and excellent mechanical strength, good gas permeability characteristics

#### Typical Applications



- Caps and closures for mineral water bottles, Caps for sparkling water and carbonated soft drinks, beverage caps.

#### Additives



Antioxidants/Acid scavenger  
UV stabilizer/Slip agent

Resin Properties	Unit	Value	Test Method
Melt Index	g/10 min	2	D1238
Density	g/cm <sup>3</sup>	0.952	D1505
Thermal Properties	Unit	Value	Test Method
Vicat Softening Point	°C	124	D1525
Molded Properties	Unit	Value	Test Method
Flectural Modulus	Mpa	1000	D790
Tensile Strenght at Yield	Mpa	25	D790
Tensile Strenght at Break	Mpa	38	D638
H.D.T	°C	78	D648
Notched Izod Impact @ 23 °C	J/m	180	D256/A

- On compression molded according to ASTM D1928C

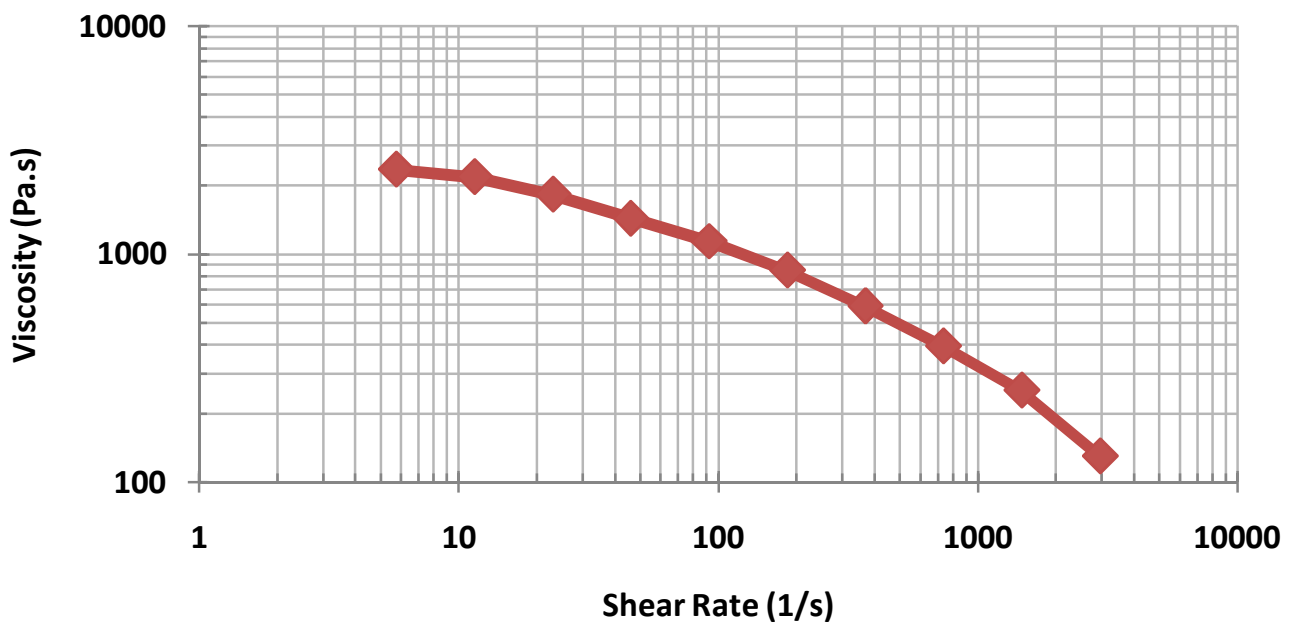
#### Processing Conditions

Recommended barrel tempratures range is between 160 °C and 190 °C

## Storage and Handling

Polyethylene products (in pelletized or powder form) should not be stored in direct sunshine and/or heat radiation. The Storage area should be dry and preferably don't exceed 50 °C. JPC would not responsible about quality diminishing such as color change, bad smell or est. which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

### Shear-Viscosity @ 190 °C



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## Product data sheet



HDPE made via Spherilene Gas-Phase Technology



### HD-52505/UV

52505 is a HDPE copolymer which is manufactured in gas phase process. This grade is an injection molding grade for applications requiring a good physical property even at low temperatures, like pails, containers and technical moldings.

**HDPE: 52505/52505UV**

**Density: 0.950-0.954**

**MFI: 4-6**

#### Characteristic Properties



- Good physical property even at low temperatures.

#### Main Applications



- Containers.

#### Additives



- HD-52505:
- Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- HD-52505 UV:
- Thermal Antioxidant (Process Stabilizer)
  - Antiblocking Agent
  - Catalyst neutralizer (acid scavenger, lubricant)
  - UV Stabilizer

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	Test Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	5	D1238
Density	g/ml	0.952	D1505
Thermal Properties @	Unit	Typical Value	Test Method
Vicat Softening Point	(°C)	124	D1525
Moulded Properties @	Unit	Typical Value	Test Method
Flexural Modulus	(MPa)	1200	D790
Tensile strength at yield	(MPa)	27	D638
Tensile strength at break	(MPa)	13	D638
H.D.T	(°C)	67	D648
Notched Izod Impact @ 23 °C	(J/m)	29	D256/A

## Handling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

## Storage

Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not responsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

## packaging

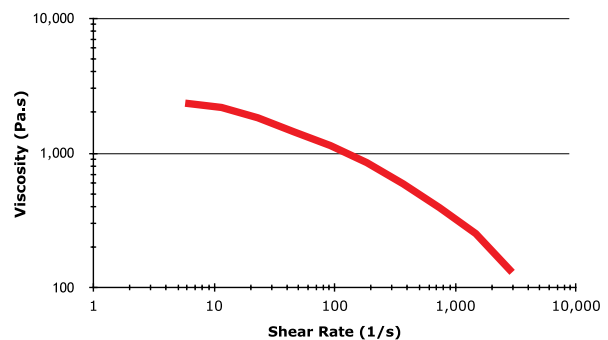
Jam Polymers Polyolefin resins are supplied in Pellet form packed in 25kg bags. Alternative packaging modes are available for selected grades.

@ On compression moulded according to ASTM D1928C

Processing Conditions:

Recommended barrel temperatures range between 190 °C and 280 °C.

### Shear-Viscosity @ 190 °C



The above values were calculated from data for 100 µm produced on a 75mm Barrnage extruder with 190°C melt temperature using a 2:1 blow ratio and a gap die of 3.0 mm.

## Product data sheet

# 52511 52511UV

➤ **HDPE made via Spherilene Gas-Phase Technology**



52511 is a HDPE copolymer injection molding grade for applications requiring a good balance between physical properties and flowability, like housewares and toys.

**HDPE: 52511/52511UV**

**Density: 0.950-0.954**

**MFI: 9-13**

### Characteristic Properties



- Good balance between physical properties and flowability,

### Main Applications



- injection molding grade
- Houseware

### Additives



- 52511:
- Thermal Antioxidant (Process Stabilizer)
  - Catalyst neutralizer (acid scavenger, lubricant)
- 52511 UV:
- Thermal Antioxidant (Process Stabilizer)
  - Antiblocking Agent
  - Catalyst neutralizer (acid scavenger, lubricant)
  - UV Stabilizer

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	ASTM Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	11	D1238
Density	g/ml	0.9520	D1505
<b>Physical properties @</b>			
Flexural modulus	(MPa)	1200	D709
Notched Izod impact at 23°C	(J/m)	22	D256/A
Vicat softening point	(°C)	122	D1525
<b>@ on compression moulded specimen obtained according to ASTM D 1928°C</b>			
<b>Fabrication conditions for injection moulding</b>			
<b>Recommended barrel temperatures range between 190 and 280°C</b>			

## Handling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

## Storage

Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not responsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

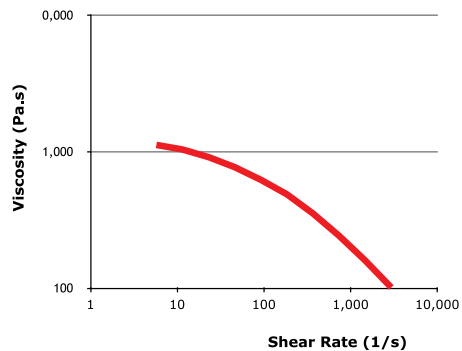
## packaging

Jam Polymers Polyolefin resins are supplied in Pellet form packed in 25kg bags. Alternative packaging modes are available for selected grades.

@ On compression moulded according to ASTM D 1928 C

Processing Conditions:  
Melt Temperature (°C): 190 -280

Shear-Viscosity @ T190 °C



The above values were Calculated from data for 100 µm produced on a 75mm Barrnage extruder with 190°C melt temperature using a 2:1 blow ratio and a gap die of 3.0 mm.



## Product data sheet

# HD-52518

➤ **HDPE made via Spherilene Gas-Phase Technology**



52518 is a HDPE copolymer for Injection Moulding for applications requiring a good balance between easy of processability and flowability and mechanical properties.

### HDPE: HD-52518

### Density: 0.950-0.954

### MFI: 16-20

#### Characteristic Properties



- Good balance between easy of processability and flowability

#### Main Applications



- Housewares
- High fluidity
- Injection moulding grade

#### Additives



- Thermal Antioxidant (Process Stabilizer)
- Catalyst neutralizer (acid scavenger, lubricant)

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	Test Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	18	D1238
Density	g/ml	0.952	D1505
Thermal Properties @	Unit	Typical Value	Test Method
Vicat Softening Point	(°C)	121	D1525
Moulded Properties @	Unit	Typical Value	Test Method
Flexural Modulus	(MPa)	1200	D790
Notched Izod Impact @ 23 °C	(J/m)	19	D256/A

@ on compression moulded specimen, according to ASTM D 1928°C

## Handling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

## Storage

Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not responsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

## packaging

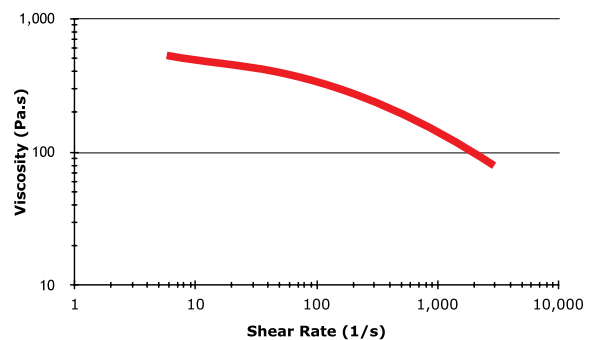
Jam Polymers Polyolefin resins are supplied in Pellet form packed in 25kg bags. Alternative packaging modes are available for selected grades.

@ On compression moulded according to ASTM D1928C

Processing Conditions:

Recommended barrel temperatures range between 190 °C and 280 °C.

Shear-Viscosity @ 190 °C



The above values were Calculated from data for 100 µm produced on a 75mm Barrnage extruder with 190°C melt temperature using a 2:1 blow ratio and a gap die of 3.0 mm.

## Product data sheet

➤ **LLDPE made via Spherilene Process**



### LL-32604/UV

32604 is a LLDPE for rotomolding which manufactured by gas phase process. This grade is suitable for all applications which need a good balance among moldability and mechanical properties together with an exceptional stress cracking resistance.

**LLDPE: LL-32604/UV**

**Density: 0.932**

**MFI: 4**

#### Features



- Excellent ESCR.

#### Applications



- High ESCR rotomolded items  
Chemical containers.

#### Additives



- LL-32604:  
Thermal Antioxidant
- LL-32604UV:  
Thermal Antioxidant  
UV Stabilizer

**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	Test Method
Melt Index	g/10 min	4	D1238
Density	g/cm <sup>3</sup>	0.932	D1505
Physical Properties	Unit	Typical Value	Test Method
Flectural Modulus	Mpa	1350	D790
Notched Izod Impact @ 23 °C	J/m	NB	D256/A
E.S.C.R	h	>1000	D1693

## Handelling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

## Storage

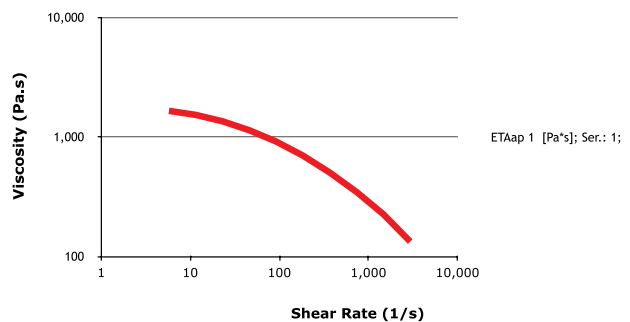
Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties. The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not responsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

## packaging

Jam Polymers Polyolefin resins are supplied in plet form packed in 25kg bags. Alternative packaging modes are available for selected grades.

- On compression molded according to ASTM D1928C  
Processing Conditions  
Recommended barrel tempratures range between 190 °C and 280 °C.

### Shear-Viscosity @ 190 °C



The above values were  
Calculated from data for 100 µm  
produced  
on a 75mm Barrnage  
extruder with 190°C melt tem-  
perature using a 2:1 blow ratio  
and a gap die of 3.0 mm.

## Product data sheet

# 38504 UV

### MDPE made via Spherilene Gas-Phase Technology



MD-38504 is a UV stabilized linear medium density polyethylene grade with a narrow molecular weight distribution. It is suitable for rotational molding and some injection molding application such as technical parts and closures. Characteristics include: good impact strength, excellent external and internal surface finish, and is UV stabilized.

#### MDPE: 38504 UV

#### Density: 0.936-0.940

#### MFI: 3-5

#### Characteristic Properties



- Good impact strength
- High ESCR

#### Main Applications



- Rotomolding

#### Additives



- Thermal Antioxidant (Process Stabilizer)
- Catalyst neutralizer (acid scavenger, lubricant)
- UV Stabilizer

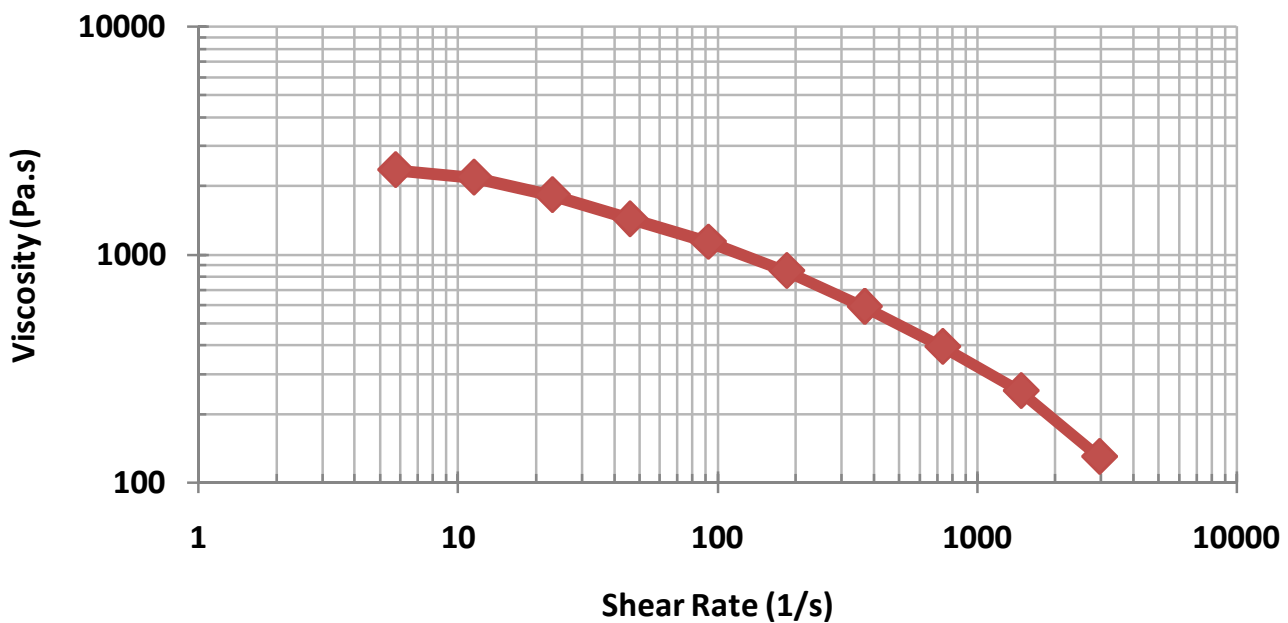
**Material properties** (This data are typical values and are not to be construed as product specifications.)

Resin Properties	Unit	Typical Value	ASTM Method
Melt Index (190°C/ 2.16Kg)	(g/10 min)	4	D1238
Density	g/ml	0.938	D1505
<b>Physical properties @</b>			
Flexural Modulus	(MPa)	650	D790
Tensile strength at yield	(MPa)	15	D638
Tensile strength at break	(%)	800	D638
Charpy Unnotched impact Strength	KJ/m <sup>2</sup>	25	D256
Vicat Softening Temperature	(°C)	115	D1525
Durometer Hardness	Shore D	60	D2240
@ on compression moulded specimen obtained according to ASTM D 1928°C			

## Storage and Handling

Polyethylene products (in pelletized or powder form) should not be stored in direct sunshine and/or heat radiation. The Storage area should be dry and preferably don't exceed 50 °C. JPC would not responsible about quality diminishing such as color change, bad smell or est. which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

### Shear-Viscosity @ 190 °C



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