JAM Petrochemical Company

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HDPE MSDS

Material Safety Data Sheet (MSDS)

According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Revision Number: 1

Product Name:

HDPE
High Density Polyethylene



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING

Identification of the substance or preparation:	**High Density Polyethylene**
Country of origin:	**Iran (Islamic Republic of Iran)**
CAS Number:	**9002-88-4**
Synonyms:	**HDPE, PE-HD**
Company/undertaking identification	**Jam Petrochemical Company**
Manufacturer subcontractor:	**(JPC)**
Emergency phone number:	**00982188654545**
Contact email:	**info@jpcomplex.com**
Fax:	**00982188771426**
Association/Organization:	**None**
Use of the Substance / Preparation:	**Plastic bottle, Corrosion Resistant pipe and tubing, cable coating, Blow molded packaging, medical packing, adhesive …**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances:	**Not applicable, Inert substance.**
Hazardous label(s):	**This product is not hazardous**
Toxicological characteristics:	**This product is not toxic.**
Substances present at a concentration below the minimum danger:	**Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring to report in this section, in accordance with EU or national regulations.**
Other component:	**None**

3. IDENTIFICATION OF HAZARDS

Risk phrases:	**Stable product. It doesn't offer hazard in its normal handling and storage state.**
Skin contact:	**Negligible hazard at ambient temperatures (-18 to +38 degrees C; 0 to 100 degrees F). Exposure to hot material may cause thermal burns.**
Eye contact:	**Particulates may scratch eye surfaces / cause mechanical irritation.**

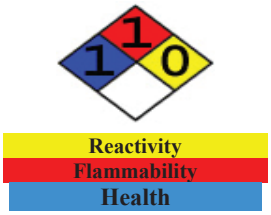
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Inhalation : Dust may cause mechanical irritation. Negligible hazard at ambient temperature (-18 to 38 Deg C; 0 to 100 Deg F) Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract.

If swallowed: Minimal toxicity.

Other information: Product not classified as hazardous by UNO.

4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor
NEVER induce swallowing in an unconscious person.

Skin contact : Wash skin with soap and water. For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing, as the damaged flesh can be easily torn.

In case of exposure by inhalation: In case of adverse exposure to vapors and/or aerosols formed at elevated temperatures, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

In case of splashes or contact with eyes: This product is an inert solid. If in eye, remove as one would any foreign object. Rinse with plenty of running water. Obtain medical attention if symptoms occur.

In case of swallowing: There is no known acute effect after over-exposure to this product. If swallowed, rinse mouth with water (only if the person is conscious). Obtain medical attention if symptoms occur.

Note of physician: Do not induce vomiting.

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5. FIRE FIGHTING MEASURES

Flammable class:	**Flammability Risk 1 (Slight)**
Suitable extinguishing media:	**Use water spray to cool fire exposed surfaces, protect personnel, and extinguish the fire. For small fire, use dry chemical or CO2. For large fire, Use dry chemical powder or alcohol-resistant foam.**
Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:	**In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, and Organic acids.**
Special protective equipment for fire fighting :	**Respiratory and eye protection required for fire fighting personnel.**
Other information:	**Solid material, may burn at or above the flashpoint, and airborne dust may explode if ignited. If thermally decomposed, flammable/toxic gases may be released. Toxic gases will form upon combustion. Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge**

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	**Avoid creating dusty conditions and prevent wind dispersal. Use suitable protective equipment .Keep away from sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.**
Environmental precautions:	**No special measures required.**
Methods for cleaning up and disposal:	**Small spill and leak - Vacuum or sweep up material and place in a designated lapelled waste container. Clean up affected area with a large amount of water. Large spill and leak - Use explosion-proof electrical (ventilating, lighting and material handling) equipment.**
Other information:	**Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Recover the spilled material and place in suitable containers**



for recycle or disposal.

7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the product is handled

Handling:	Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid creating dusty conditions and prevent wind dispersal. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take measures against static discharge. Keep away from sources of ignition.
Storage:	Store in a fireproof location. Keep away from incompatible materials and avoid specific conditions. Containers should be grounded. Take precautionary measures against electrostatic discharges. Do not stack more than 2 pallets high in connection with risk of falling over. Do not stack pallets with grades containing slip or Anti-Block (AB) additives. Protect from (sun) light. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:	5 mg/m3 (respirable dust), and 10 mg/m3 (total inhalable dust) based on the OSHA PEL for nuisance dust. The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity. NPC recommends that the lower exposure levels be observed as reasonable worker protection.
Exposure controls:	Local exhaust ventilation of process equipment may be needed to control particulate exposures to below the recommended exposure limit.
Personal protective equipment:	For open systems at ambient temperature (-18 to 38 degrees C) where contact is likely, wear safety glasses with side shields. Where contact may occur with hot material, wear thermal resistant gloves, arm protection, and

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Eye protection:	**a face shield.**
Respiratory protection:	**Safety glasses with side shields.**
Hand protection:	**Wear dust protection mask P2.** **When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten product.**
Skin and body protection:	**Working clothes.**
Health measures:	**Not available**
Environmental exposure controls:	**Plastic pellets are defined as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations.**

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:	**None**
Appearance (at 20°C):	**Solid. (Granular solid. Powder.)**
Colour:	**Off-white.**
Odour:	**Wax-like when heated**
PH (at 20°C):	**Not applicable.**
Freezing /Melting point (°C):	**125-145**
Boiling point/range (°C):	**Decomposes. >300 °C**
Flash point (°C):	**>343 °C**
Flammability:	**Flammability Risk 1 (Slight)**
Auto-ignition temperature:	**> 330 °C**
Explosive properties:	**None**
Oxidising properties:	**None**
Vapour pressure (at 20°C):	**Not available**
Density (at 20°C):	**0.941 to 0.97 g/cm3**
Solubility (at 20°C):	**water solubility: Insoluble in cold water** **solubility in fats: Insoluble**
Viscosity (40°C):	**Not applicable**
Evaporation rate:	**Not applicable**
Other information:	**Insoluble in almost all solvents at room temperature; soluble in many organic solvents above 93 deg C; may "swell" by absorption of solvents below 60 deg C**

10. STABILITY AND REACTIVITY

Stability:	**Stable under recommended storage and handling conditions**
Conditions to avoid:	**Temperatures over 650 F (343 C) will lead to resin degradation and decomposition. Keep**



	away from heat, sparks and flame and exposure to (sun) light. Prevent formation of dust clouds. Take measures against static discharge. Avoid storage or contact with strong oxidizing agents.
Material to avoid:	Fluorine Strong Oxidizing agents.
Hazardous decomposition products:	Highly dependent on temperature and environmental conditions, a variety of decomposition products may be formed, such as low molecular weight hydrocarbons and hydrocarbon oxidation products (acids, ketons, and aldehydes). Also thermal decomposition under condition of limited oxygen supply will give rise to carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	- LD_{50}, oral, rat ($mg.kg^{-1}$): >5000 mg/kg - LD_{50}, oral, mouse ($mg.kg^{-1}$): Not Available - LD_{50}, dermal ($mg.kg^{-1}$): Not Available
Sub chronic – chronic toxicity:	None
Sensibilization:	Not available
Carcinogenicity:	Carcinogenic effects are not known.
Reproductive effects:	Reproductive effects are not known.
Human experience:	Not available
Other information:	During heating and processing of the material small amounts of free monomer may evaporate resulting in airborne concentration that may cause irritating effects of the respiratory tract and nausea.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	No specific ecological data are available for this product.
Bioaccumulative potential:	Effects on nature due to bioaccumulation are not known.
Mobility:	No specific ecological data are available for this product.
Persistence and degradability:	No specific ecological data are available for this product.
Other adverse effects:	No specific ecological data are available for this product.

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High Density Polyethylene



Reactivity
Flammability
Health

13. DISPOSAL CONSIDERATIONS

Disposal of product:	**Waste must be disposed of in accordance with national and local environmental regulations.**
Disposal of packaging:	**Polyethylene bags should be reused in the working area, products transportation or recycled by specialized companies.**

14. TRANSPORT INFORMATION

Land transport:	**Not established**
ADR/RID:	**Not established**
Packaging group:	**Not applicable**
Maritime transport:	**Not applicable**
Air transport:	**Not applicable**

15. REGULATORY INFORMATION

Hazardous label(s):

	NPCA-HMIS	NFPA	- KEY
HEALTH	**1**	**1**	**4=Severe**
FLAMMABILITY	**1**	**1**	**3=Serious**
REACTIVITY	**0**	**0**	**2=Moderate**
			1=Slight
			0=Minimal

Safety phrases:	**This product is not hazardous**
Risk phrases:	**This product is not hazardous**

16. OTHER INFORMATION

None

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Reactivity
Flammability
Health

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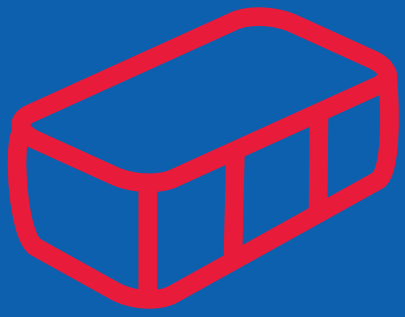
The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC

Disclaimer of liability:

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HDPE II
MSDS

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HDPE II MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

HEAVY-DENSITY POLYETHYLENE (HDPE)

SECTION 1: IDENTIFICATION OF THE MATERIAL

Material name	Heavy-Density Polyethylene (HDPE)
CAS No.	9002-88-4
Other names	Ethene homopolymer; Ethylene homopolymer; Ethylene polymer; Polyethylene; Polyethylene wax
Manufacturer / supplier contact	Not specified in the source document
Physical state	Solid
Appearance / odor	Colorless, odorless, approximately crystalline solid
Specific gravity	0.941–0.965
Solubility in water (20°C)	Insoluble
Odor threshold (T.O.)	Not specified
Routes of exposure	Not specified

SECTION 2: EXPOSURE LIMITS AND HAZARDOUS VALUES

TLV-TWA	Not specified in the source document
TLV-STEL	Not specified in the source document
NFPA hazard diamond	Values shown in the source: 0 / 1 / 0
LD50 / LC50 / IDLH	Values not clearly specified in the source document
LEL / UEL (% V/V)	Not specified

SECTION 3: PHYSICAL PROPERTIES

Melting point	126–136°C
Freezing point	Not specified
Boiling point	341–349°C (as stated in the source)
Vapor pressure	Not specified
Vapor density (air = 1)	Not specified
Evaporation rate	Not specified
Specific gravity	0.941–0.965
Water solubility	Insoluble

SECTION 4: FIRE AND EXPLOSION HAZARD INFORMATION

Fire and explosion hazards: Polyethylene can burn when exposed to high heat, such as a match flame. Combustion produces carbon dioxide, carbon monoxide, and organic chemicals such as formaldehyde, acrolein, and hydrocarbons.

Extinguishing media: Water, dry chemical powder, CO■, and foam.

Special firefighting procedures: Remove all combustible materials and containers from the area. During firefighting, stand upwind. Cool the container from a safe distance using a water spray. If the space is enclosed, thoroughly ventilate the area after extinguishing the fire.

Unusual fire/explosion hazards: Toxic vapors may accumulate in areas without adequate ventilation.

SECTION 5: REACTIVITY INFORMATION

Stability / polymerization: Stable at normal temperature and pressure. Slowly decomposes when exposed to sunlight and air.

Chemical incompatibilities: Strong oxidizing agents (perchloric acid), organic solvents (benzene, gasoline, aromatic hydrocarbons), and strong acids (sulfuric acid).

Hazardous decomposition products: CO, CO■, and organic materials such as formaldehyde, acrolein, and hydrocarbons.

SECTION 6: HEALTH HAZARD INFORMATION

Eyes	Dust from the material causes slight eye irritation. Vapors produced by thermal decomposition may cause irritation and watering of the eyes.
Skin	Normally no significant effect. If skin irritation occurs, wash the affected area with lukewarm water and non-irritating soap. Seek medical attention if irritation persists.
Inhalation	Inhalation of solid particles causes slight irritation. Inhalation of vapors may cause respiratory irritation and, at high concentrations, may be fatal. If respiratory symptoms occur, move the person to fresh air.
Ingestion	Normally no significant effect. Ingestion of a large amount may cause nausea and shock. In severe cases, seek medical attention.
Acute effects	As described above.
Chronic effects	Not specifically stated in the source document.
First aid – eyes	Keep eyelids open and flush eyes with lukewarm water for 15 minutes. If irritation continues, seek medical attention immediately.

SECTION 7: SPILL, LEAK AND WASTE DISPOSAL PROCEDURES

Spill / leak: Restrict access to the area. Remove all heat and ignition sources. Wear a mask and collect the spilled material.

Waste disposal: Sweep the material into bags or containers. Wash the area with water.

SECTION 8: EXPOSURE PREVENTION AND PROTECTIVE MEASURES

Engineering controls	Adequate local ventilation.
Storage	Store polyethylene in well-ventilated areas away from heat, ignition sources, and incompatible materials. Avoid generation of dust.
Respiratory protection	Special respiratory equipment; filter mask. Use appropriate respiratory protection when dust or combustion vapors are present.
Eye protection	Chemical safety goggles with side shields; use goggles with face protection where appropriate.
Gloves	Not specified in the source document.
Protective clothing	Not specified in the source document.
Footwear	Not specified in the source document.
Other PPE	Not specified in the source document.
Transport / handling	When transporting in 25-kg bags, avoid generating dust from the material.
Environmental effects	Environmental groups have raised concerns about its persistence as waste; over the long term, sunlight causes decomposition.

Note: This English version is a translation of the information contained in the supplied Persian MSDS. Fields that were blank, unclear, or not explicitly specified in the source have been marked accordingly rather than supplemented with external information.

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LLDPE MSDS

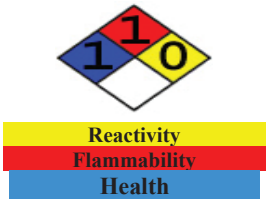
Material Safety Data Sheet (MSDS)

According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Revision Number: 1

Product Name:

LLDPE
Linear Low Density Polyethylene



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING

Identification of the substance or preparation:	**Linear Low Density Polyethylene**
Country of origin:	**Iran (Islamic Republic of Iran)**
CAS Number:	**25087-34-7**
Synonyms:	**LLDPE, PE-LLD**
Company/undertaking identification	**Jam Petrochemical Company**
Manufacturer subcontractor:	**(JPC)**
Emergency phone number:	**00982188654545**
Contact email:	**info@jpcomplex.com**
Fax:	**00982188771426**
Association/Organization:	**None**
Use of the Substance / Preparation:	**Liner bags, deep freeze film, garment wrap, refuse and Heavy duty sacks, Builders reel, Co-extrusion, shrink silage, green house and Mulch film…**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances:	**Not applicable, Inert substance.**
Hazardous label(s):	**This product is not hazardous**
Toxicological characteristics:	**This product is not toxic.**
Substances present at a concentration below the minimum danger:	**Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring to report in this section, in accordance with EU or national regulations.**
Other component:	**None**

3. IDENTIFICATION OF HAZARDS

Risk phrases:	**Stable product. It doesn't offer hazard in its normal handling and storage state.**
Skin contact:	**Negligible hazard at ambient temperatures (-18 to +38 degrees C; 0 to 100 degrees F). Exposure to hot material may cause thermal burns.**
Eye contact:	**Particulates may scratch eye surfaces / cause mechanical irritation.**

Product Name:

LLDPE
Linear Low Density Polyethylene



	(-18 to 38 Deg C; 0 to 100 Deg F) Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract.
If swallowed:	**Minimal toxicity.**
Other information:	**Product not classified as hazardous by UNO.**

4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor
NEVER induce swallowing in an unconscious person.

Skin contact :	**Wash skin with soap and water. For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing, as the damaged flesh can be easily torn.**
In case of exposure by inhalation:	**In case of adverse exposure to vapors and/or aerosols formed at elevated temperatures, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.**
In case of splashes or contact with eyes:	**This product is an inert solid. If in eye, remove as one would any foreign object. Rinse with plenty of running water. Obtain medical attention if symptoms occur.**
In case of swallowing:	**There is no known acute effect after over-exposure to this product.**
Note of physician:	**If swallowed, rinse mouth with water (only if the person is conscious). Obtain medical attention if symptoms occur. Do not induce vomiting.**

5. FIRE FIGHTING MEASURES

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Suitable extinguishing media:	**Use water spray to cool fire exposed surfaces, protect personnel, and extinguish the fire. For small fire, use dry chemical or CO2. For large fire, Use dry chemical powder or alcohol-resistant foam.**
Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:	**In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, and Organic acids.**
Special protective equipment for fire fighting :	**Respiratory and eye protection required for fire fighting personnel.**
Other information:	**Solid material, may burn at or above the flashpoint, and airborne dust may explode if ignited. If thermally decomposed, flammable/toxic gases may be released. Toxic gases will form upon combustion. Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge**

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	**Avoid creating dusty conditions and prevent wind dispersal. Use suitable protective equipment .Keep away from sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.**
Environmental precautions:	**No special measures required.**
Methods for cleaning up and disposal:	**Small spill and leak - Vacuum or sweep up material and place in a designated lapelled waste container. Clean up affected area with a large amount of water. Large spill and leak - Use explosion-proof electrical (ventilating, lighting and material handling) equipment.**
Other information:	**Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Recover the spilled material and place in suitable containers for recycle or disposal.**

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7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the product is handled

Handling:	**Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid creating dusty conditions and prevent wind dispersal. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take measures against static discharge. Keep away from sources of ignition.**
Storage:	**Store in a fireproof location. Keep away from incompatible materials and avoid specific conditions. Containers should be grounded. Take precautionary measures against electrostatic discharges. Do not stack more than 2 pallets high in connection with risk of falling over. Do not stack pallets with grades containing slip or Anti-Block (AB) additives. Protect from (sun) light. Keep in a dry place.** **Unsuitable : mild steel** **Suitable : stainless steel / Aluminum / polyethylene**

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:	**5 mg/m3 (respirable dust), and 10 mg/m3 (total inhalable dust) based on the OSHA PEL for nuisance dust. The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity. NPC recommends that the lower exposure levels be observed as reasonable worker protection.**
Exposure controls:	**Local exhaust ventilation of process equipment may be needed to control particulate exposures to below the recommended exposure limit.**
Personal protective equipment:	**For open systems at ambient temperature (-18 to 38 degrees C) where contact is likely, wear safety glasses with side shields. Where contact may occur with hot material, wear**

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Eye protection:	**Safety glasses with side shields.**
Respiratory protection:	**Wear dust protection mask P2.**
Hand protection:	**When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten product.**
Skin and body protection:	**Working clothes.**
Health measures:	**Not available**
Environmental exposure controls:	**Plastic pellets are defined as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations.**

9. PHYSICAL AND CHEMICAL PROPERTIES

	None
General information:	**Solid. (Granular solid. Powder.)**
Appearance (at 20°C):	**Off-white.**
Colour:	**Wax-like when heated , characteristic**
Odour:	**Not applicable.**
PH (at 20°C):	**125-145**
Freezing /Melting point (°C):	**Decomposes. >300 °C**
Boiling point/range (°C):	**>345 °C**
Flash point (°C):	**Flammability Risk 1 (Slight)**
Flammability:	**> 330 °C**
Auto-ignition temperature:	**None**
Explosive properties:	**None**
Oxidising properties:	**Not available**
Vapour pressure (at 20°C):	**0.91 to 0.95 g/cm3**
Density (at 20°C):	**480-560 (pellet) , 300-320 (powder)**
Bulk density (Kg/M3)	**water solubility: Insoluble in cold water**
Solubility (at 20°C):	**solubility in fats: Insoluble**
	Not applicable
Viscosity (40°C):	**Not applicable**
Evaporation rate:	**Rapid movement of particles or pellets through transfer lines generates static electricity.**
Other information:	

10. STABILITY AND REACTIVITY

Stability:	**Stable under recommended storage and handling conditions**

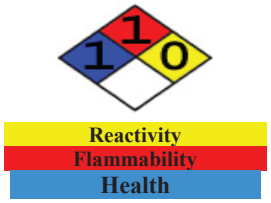
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Product Name:

LLDPE
Linear Low Density Polyethylene



Conditions to avoid:	**Temperatures over 650 F (343 C) will lead to resin degradation and decomposition. Keep away from heat, sparks and flame and exposure to (sun) light. Prevent formation of dust clouds. Take measures against static discharge.**
Material to avoid:	**Fluorine Strong Oxidizing agents.**
Hazardous decomposition products:	**Highly dependent on temperature and environmental conditions, a variety of decomposition products may be formed, such as low molecular weight hydrocarbons and hydrocarbon oxidation products (acids, ketons, and aldehydes). Also thermal decomposition under condition of limited oxygen supply will give rise to carbon monoxide.**

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	**- LD_{50}, oral, rat ($mg.kg^{-1}$): >5000 mg/kg** **- LD_{50}, oral, mouse ($mg.kg^{-1}$): Not Available** **- LD_{50}, dermal ($mg.kg^{-1}$): Not Available**
Sub chronic – chronic toxicity:	**None**
Sensibilization:	**Not available**
Carcinogenicity:	**Carcinogenic effects are not known.**
Reproductive effects:	**Reproductive effects are not known.**
Human experience:	**Not available**
Other information:	**During heating and processing of the material small amounts of free monomer may evaporate resulting in airborne concentration that may cause irritating effects of the respiratory tract and nausea.** **Occupational Exposure Limit :** **TWA for total inhalable dust : 10 mg/m3(8 hour)** **TWA for total respirable dust:5 mg/m3(8 hour)**

12. ECOLOGICAL INFORMATION

Ecotoxicity:	**No specific ecological data are available for this product.**
Bioaccumulative potential:	**Effects on nature due to bioaccumulation are not known.**
Mobility:	**No specific ecological data are available for this product.**

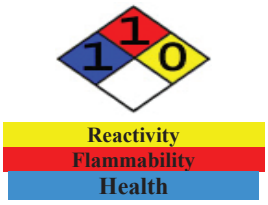
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Other adverse effects:	**No specific ecological data are available for this product.**

13. DISPOSAL CONSIDERATIONS

Disposal of product:	**Waste must be disposed of in accordance with national and local environmental regulations.**
Disposal of packaging:	**Polyethylene bags should be reused in the working area, products transportation or recycled by specialized companies.**

14. TRANSPORT INFORMATION

Land transport:	**Not established**
ADR/RID:	**Not established**
Packaging group:	**Not applicable**
Maritime transport:	**Not applicable**
Air transport:	**Not applicable**

15. REGULATORY INFORMATION

Hazardous label(s):

	NPCA-HMIS	NFPA	- KEY
HEALTH	1	1	4=Severe
FLAMMABILITY	1	1	3=Serious
REACTIVITY	0	0	2=Moderate
			1=Slight
			0=Minimal

Safety phrases:	**This product is not hazardous**
Risk phrases:	**This product is not hazardous**

16. OTHER INFORMATION

None

JAM Petrochemical Company
World Class. Distinguished

LLDPE MSDS

Product Name:

LLDPE
Linear Low Density Polyethylene



Reactivity
Flammability
Health

The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC

Disclaimer of liability:

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