Safety Data Sheet



Section 1: Identification of the Substance/Mixture and of the Company/Undertaking			
1.1 Product identifier			
Product Name	Low Density Polyethylene		
Synonyms	Ethene polymer; Ethylene Homopolymer; LDPE; Polyethylene		
Product Grades	EN1817AS		
1.2 Relevant identified uses of the substance or mixture and uses advised against			
Relevant identified use(s)	Plastic film, laminating, molding, coating.		
1.3 Details of the supplier of the safety data sheet			
Manufacturer	Westlake Polymers LLC 2801 Post Oak Blvd. Houston, TX 77056 United States www.westlake.com		
Telephone (General)	713-960-9111		

1.4 Emergency telephone number

800-424-9300 - CHEMTREC

Section 2: Hazards Identification

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP DSD/DPD		Not classifiedNot classified
2.2 Label Eleme	nts	
CLP	Hazard Statements	 No label element(s) required
DSD/DPD	Risk phrases	 No label element(s) required
2.3 Other Hazard	ds	
CLP	•	bustible dust concentrations in air.
DSD/DPD	 According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous. May form combustible dust concentrations in air. According to European Directive 1999/45/EC this material is not considered dangerous. 	

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

Low Density Polyethylene		Westlake Internal SDS #: PE038
OSHA HCS 2012		Not classified
2.2 Label eleme	ents	
OSHA HCS 2012	Hazard statements	 No label element(s) required
2.3 Other hazar	ds	
OSHA HCS 2012		 As shipped, product is not hazardous. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is not considered hazardous.
Canada According to WHN	NIS 2015	
2.1 Classification	on of the subs	stance or mixture
WHMIS 2015		Not classified
2.2 Label eleme	ents	
WHMIS 2015		 No label element(s) required.

2.3 Other hazards

WHMIS 2015

 May form combustible dust concentrations in air. In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

• Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition		
Chemical Name	Identifiers (CAS)	%
Polyethylene	9002-88-4	>97
Slip and/or Antioxidants	Proprietary	<1–0
Diatomaceous Earth* or Talc**	68855-54-9 or 14807-96-6	<2.0 – 0

* contains crystalline silica CAS #s 14464-46-1 & 14808-60-7

** contains < 1% quartz or crystalline silica

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation	 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
Skin	 For thermal burns, flush or submerge effected area in cold water to dissipate heat. Cover with clean bandage material. Do not peel material from skin. Get medical attention. For contact at ambient temperatures, wash with soap and water.
Еуе	 If dust or molten material contacts the eye, immediately flush with plenty of water for at least 15 minutes. If irritation persists, get medical attention immediately.
Ingestion	 First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

 Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media	٠	Water fog, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing • None known. Media

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards	• Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.	
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, formaldehyde, acetaldehyde, irritating smoke.	

5.3 Advice for firefighters

• Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures Personal Precautions Do not walk through spilled material. Do not breathe dust. Avoid contact with skin

Emergency Procedures
 Contain spill and monitor for excessive dust accumulation. Avoid unnecessary

• Contain spill and monitor for excessive dust accumulation. Avoid unnecessary personnel and equipment traffic in the spill area. Ventilate closed spaces before entering.

6.2 Environmental precautions

• No special environmental precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures	Avoid generating dust.Use clean nonsparking tools to collect material.	
	 Dust deposits should not be allowed to accumulate on surfaces, as these may for an explosive mixture if they are released into the atmosphere in sufficient concentration. 	m

6.4 Reference to other sections

• Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Avoid contact with molten material; do not breathe fumes, vapors, dust or sprays from molten or burning material. When processing at > 600°F (315°C), consider use of a respirator to avoid breathing decomposition products.
 - Do not use in areas without adequate ventilation. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

 Use appropriate Personal Protective Equipment (PPE) Avoid contact with skin and eyes. Do not breathe dust. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

- Storage
- Keep container closed and in ventilated area, away from ignition sources, heat, open flames, and direct sunlight. Do not store with incompatible materials.

7.3 Specific end use(s)

• Refer to Section 1.2 - Relevant identified uses

7.4 Other Information

• For prevention of fire and explosion, keep from contact with incompatible materials. Minimize dust generation and accumulation. Because product may accumulate a static charge, use proper bonding and/or grounding procedures prior to transfer. In the United States of America, refer to NFPA® Pamphlet No. 654, "Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 edition."

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines			
	Result	ACGIH	NIOSH
Quartz (14808-60-7)	TWAs	0.025 mg/m3 TWA (respirable fraction)	0.05 mg/m3 TWA (respirable dust)
Cristobalite (14464-46-1)	TWAs	0.025 mg/m3 TWA (respirable fraction)	0.05 mg/m3 TWA (respirable dust)
Talc (14807-96-6)		2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	2 mg/m3 TWA (containing no Asbestos and <1% Quartz, respirable dust)

8.2 Exposure controls

Engineering Measures/Controls Personal Protective Equipment	 Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances; such as poorly ventilated spaces, very hot processing, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.
Respiratory	• For limited exposure use an N95 dust mask. For prolonged exposure use an air- purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.
Eye/Face	Wear safety goggles.
Hands	Wear thermally resistant gloves and long sleeves when handling molten product.
Skin/Body	Wear long sleeves and/or protective coveralls.
Environmental Exposure Controls	 Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene NIOSH = National Institute of Occupational Safety and Health OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15 minute exposures TWA = Time Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	A translucent to whitish solid with an odorless to mild odor.
Color	Translucent to whitish.	Odor	Odorless to mild.
Odor Threshold	NDA		
General Properties			
Boiling Point	NDA	Melting Point	100 to 120 C(212 to 248 F)
Decomposition Temperature	>300 C (573 F) (estimated)	рН	NDA
Specific Gravity/Relative Density	0.901 to 0.935 Water=1	Water Solubility	Negligible.
Viscosity	NDA	Explosive Properties	Not Explosive.
Oxidizing Properties:	Not an oxidizer.		
Volatility			
Vapor Pressure	NDA	Vapor Density	NDA
Evaporation Rate	NDA		
Flammability	•	-	
Flash Point	>343 C(649.4 F) (estimated)	UEL	NDA
LEL	NDA	Autoignition	NDA
Flammability (solid, gas)	Not Flammable.		
Environmental	·		
Octanol/Water Partition coefficient	NDA		

9.2 Other Information

• No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

• No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

• Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

• Hazardous polymerization not indicated.

10.4 Conditions to avoid

• Heat, sparks, open flame.

10.5 Incompatible materials

• Strong oxidizing agents, fluorine.

10.6 Hazardous decomposition products

• No data available

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Cristobalite (< 1.4%)	14464-46-1	Multi-dose Toxicity: Inhalation-Mouse TCLo • 70 mg/m ³ 5 Hour(s) 12 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Fibrosis (interstitial); Lungs, Thorax, or Respiration:Other changes; Inhalation-Mouse TCLo • 43 mg/m ³ 5 Hour(s) 9 Day(s)- Intermittent; Lungs, Thorax, or Respiration:Pleural effusion; Lungs, Thorax, or Respiration:Other changes; Inhalation-Mouse TCLo • 70 mg/m ³ 5 Hour(s) 12 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Fibrosis (interstitial); Lungs, Thorax, or Respiration:Other changes; Inhalation-Mouse TCLo • 43 mg/m ³ 5 Hour(s) 9 Day(s)- Intermittent; Lungs, Thorax, or Respiration:Other changes; Inhalation-Mouse TCLo • 43 mg/m ³ 5 Hour(s) 9 Day(s)- Intermittent; Lungs, Thorax, or Respiration:Other changes; Inhalation-Mouse TCLo • 43 mg/m ³ 5 Hour(s) 9 Day(s)-
Quartz (< 0.1%)	14808-60-7	Acute Toxicity: Inhalation-Human TCLo • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Cough; Lungs, Thorax, or Respiration:Dyspnea; Inhalation-Human TCLo • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Cough; Lungs, Thorax, or Respiration:Dyspnea; Multi-dose Toxicity: Inhalation-Rat TCLo • 15 mg/m ³ 79 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosing alveolitis; Lungs, Thorax, or Respiration:Other changes; Biochemical:Metabolism (intermediary):Effect on inflammation or mediation of inflammation; Inhalation-Rat TCLo • 25 mg/m ³ 5 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, foral (neumoconiosis); Lungs, Thorax, or Respiration:Sputum; Immunological Including Allergic:Increase in cellular immune response; Inhalation- Rat TCLo • 15 mg/m ³ 79 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Sputum; Immunological Including Allergic:Increase in cellular immune response; Inhalation- Rat TCLo • 15 mg/m ³ 79 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosing alveolitis; Lungs, Thorax, or Respiration:Other changes; Biochemical:Metabolism (intermediary):Effect on inflammation or mediation of inflammation; Inhalation-Rat TCLo • 25 mg/m ³ 5 Day(s)-Intermittent; Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Sputum; Immunological Including Allergic:Increase in cellular immune response; Tumorigen / Carcinogen: Inhalation-Rat TCLo • 50 mg/m ³ 6 Hour(s) 71 Week(s)-Intermittent; Tumorigenic:Carcinogenic by RTECS criteria; Liver:Tumors; Inhalation-Rat TCLo • 50 mg/m ³ 6 Hour(s) 71 Week(s)-Intermittent; Tumorigenic:Carcinogenic by RTECS criteria; Liver:Tumors
Talc (< 2%)	14807-96-6	Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; Skin-Human • 300 µg 3 Day(s)- Intermittent • Mild irritation; Tumorigen / Carcinogen: Inhalation-Rat TCLo • 18 mg/m ³ 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic</i> :Carcinogenic by RTECS criteria; <i>Lungs, Thorax, or Respiration</i> :Bronchiogenic carcinoma; <i>Endocrine</i> :Tumors; Inhalation-Rat TCLo • 18 mg/m ³ 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic</i> :Carcinogenic by RTECS criteria; <i>Lungs, Thorax, or Respiration</i> :Bronchiogenic carcinoma; <i>Endocrine</i> :Tumors; Inhalation-Rat TCLo • 18 mg/m ³ 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic</i> :Carcinogenic by RTECS criteria; <i>Lungs, Thorax, or Respiration</i> :Bronchiogenic carcinoma; <i>Endocrine</i> :Tumors

GHS Properties	Classification
Acute toxicity	EU/CLP • OSHA HCS 2012 • WHMIS 2015 •NDA
Aspiration Hazard	EU/CLP • OSHA HCS 2012 • WHMIS 2015 •Not relevant
Carcinogenicity	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met
Skin sensitization	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met
STOT-RE	EU/CLP • OSHA HCS 2012 • WHMIS 2015 •NDA
STOT-SE	EU/CLP • OSHA HCS 2012 • WHMIS 2015 •NDA
Toxicity for Reproduction	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met
Respiratory sensitization	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • OSHA HCS 2012 • WHMIS 2015 • Classification criteria not met

Route(s) of entry/exposure Medical Conditions Aggravated by Exposure	Inhalation, Skin, Eye, IngestionDisorders of the lungs.
Potential Health Effects	

• Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

• Prolonged exposure to the dust may cause wheezing, chest tightness, productive cough nasal irritation and symptoms of chronic respiratory disease.

Inhalation Acute (Immediate)

Chronic (Delayed)

Preparation Date: 12/December/2014 Revision Date: 04/April/2017

Skin	
Acute (Immediate)	 Exposure to dust may cause mechanical irritation.
Chronic (Delayed)	No data available.
Eye	
Acute (Immediate)	 Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.
Chronic (Delayed)	No data available.
Ingestion	
Acute (Immediate)	• Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.
Chronic (Delayed)	No data available

Chronic (Delayed)

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Carcinogenic Effects						
	CAS	IARC	NTP			
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen			
Cristobalite	14464-46-1	Group 1-Carcinogenic	Not Listed			

Key to abbreviations

LD = Lethal Dose

MLD = Mild

Section 12 - Ecological Information

12.1 Toxicity

NDA

12.2 Persistence and degradability

NDA

12.3 Bioaccumulative potential

NDA

12.4 Mobility in Soil

NDA

12.5 Results of PBT and vPvB assessment

• PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

NDA

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, • and/or international regulations.
- Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, • and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not regulated	NDA	NDA	NDA
TDG	NDA	Not regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not regulated	NDA	NDA	NDA

Low Density Polyethylene Westlake Internal SDS #: PE038					
IATA/ICAO	NDA	Not regulated	NDA	NDA	NDA
14.6 Special precautions for user			• No	one known.	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Not relevant.				ot relevant.	
Section 15 - Regulatory Information					
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture					
SARA Hazard Cla	assifications	None			
Inventories		These products comply with the following inventories:			
		Australia AICS	Canada DSL/NDSL	China	EU EINECS/ ELNICS
		Japan ENCS	Korea KECI	New Zealand	Philippines PICCS
		USA TSCA			
California Prop 6	5	In compliance, no reportable substances			
CERCLA		 In the event of a spill, the end user should verify whether reporting is required under local, state, and/or federal regulations. 			
CONEG		 These products are in compliance with the heavy metals requirements of the Coalition of Northeastern Governors and California Toxics in Packaging Prevention Act (AB2021). 			
Ozone Depleting	Substances	 In compliance with 40 CFR 82, no reportable substances. 			
RCRA		 In the form delivered by Westlake, these products are not considered as hazardous waste, and are not subject to reporting under the Resource Conservation and Recovery Act. 			

15.2 Chemical Safety Assessment

• No Chemical Safety Assessment has been carried out.

Section 16 - Other Information		
Last Revision Date	04/April/2017	
Preparation Date	12/December/2014	
For Other Information	Contact Westlake Polymers LLC Customer Service 1-800-545-9577 (Monday-Friday, 7:30am-5:00pm - central standard time)	
Disclaimer/Statement of Liability	It is your responsibility to determine that our product is safe, lawful, and technically suitable for your intended uses. This safety data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of the user's operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this safety data sheet should be provided to employees and/or customers. Westlake Polymers LLC must rely on the user to use this information to develop appropriate work practice guidelines and employee instructional programs specific to the user's operation.	
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The information in this sheet is valid for cited regulations published as of the date this document was prepared, as shown herein. Updates may be prepared as the regulations are amended or pending revised information about the resin. It is the customer's responsibility to seek updated regulatory information on any specific resin.

Key to abbreviations NDA = No data available