HALDIA PETROCHEMICALS LTD

MATERIAL SAFETY DATA SHEET (MSDS)

LLDPE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUBSTANCE OR PRODUCT TRADE NAME	**Halene L**
CHEMICAL CLASSIFICATION	Synthetic polymer
COMPANY/ UNDERTAKING NAME AND ADDRESS	Haldia Petrochemicals Limited, PO Box No 12, Haldia Plant PO Durgachak, Dist Midnapore West Bengal, India PIN 721 602
TELEPHONE	091-3224-274384 / 274400
EMERGENCY TELEPHONE NUMBER	091-3224-275916

2. COMPOSTION AND INFORMATION ON INGREDIENTS

CHEMICAL NAME	CONTENT (Normal)*	CAS NUMBER	EXPOSURE LIMITS IN AIR		
			ACGIH TLV-TWA	ACGIH TLV-STEL	IDLH
Linear low density Polyethylene	99.25 wt%	**25895-47-0**	10 mg/m^3	NA	NA
Proprietary Additives	<= 0.75 wt%	Mixture			
* For different grade of LLDPE, minor changes may be there.					

3. HAZARD CLASSIFICATION

EMERGENCY OVERVIEW	This material is not hazardous by OHSA hazard communication definition. Dust may form explosive mixtures with air. At process Temperature irritating fumes may be produced.

POTENTIAL HEALTH HAZARDS					
	EYE	SKIN	INHALATION	INGESTION	OTHERS
ACUTE	Mechanical irritation is possible	Molten polymer may cause thermal burns	Inhalation of process fumes and vapours may cause soreness in the nose and throat and coughing. Exposure to high conc. of dust may cause slight irritation by mechanical action	Ingestion not a likely route of exposure	
CHRONIC	No known chronic health effects				

NFPA HAZARD SIGNALS	HEALTH	FLAMMABILITY	REACTIVITY	SPECIAL
	0	1	0	
HAZCHEMCODE				

4. FIRST AID MEASURES

SKIN CONTACT	If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissues and polymer. Do not attempt to peel the polymer from skin. Obtain immediately emergency medical attention if burn is deep or extensive
EYE CONTACT	Wash eyes with clean low-pressure water. Seek medical attention if discomfort persists.
INHALATION	If symptoms are experienced, move victim to fresh air. Obtain medical attention if breathing difficulty persists
INGESTION	Adverse health effects due to ingestion are not anticipated
OTHER INSTRUCTIONS	

5. FIRE FIGHTING MEASURES

FLASH POINT	NA
AUTO IGNITION TEMP	343 ^{0}C
FLAMMABLE LIMITS IN AIR BY VOL%	LEL%: NA, UEL%: NA
FIRE EXTINGUISHING AGENTS AND SPECIAL PROCEDURES	Dry chemical, carbon dioxide, and water spray, regular foam,
UNUSUAL FIRE AND EXPLOSION HAZARDS	Polymer dust particles in the atmosphere are combustible and may be explosive. CO, olefinic and paraffinic compound, trace amount of organic acids, ketones, aldehydes and alcohols may be formed during combustion.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS	Wear an approved positive pressure self-contained breathing apparatus and fire-fighter turnout gear

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Avoid generating dust. Potential dust explosion hazard. Use only non-sparking tools. Material creates dangerous slipping hazard on hard surfaces
ENVIRONMENTAL PRECAUTIONS	No data available
METHOD OF CLEANING	Pick up and retain for recycle or disposal

7. HANDLING AND STORAGE

HANDLING	Keep away from heat, sparks, open flame, or any ignition source. Use with adequate ventilation. Material can make walking hazardous, potentially causing falls and serious injury. After handling always wash hands thoroughly with soap and water.
STORAGE	Store away from excessive heat and away from strong oxidizing agents. Keep container closed to prevent contamination

8. EXPOSURE CONTROLS-PERSONAL PROTECTION

VENTILATION AND ENGINEEERING CONTROL	Ventilate area to prevent accumulation of dust and fumes.
OTHER CONTROL PARAMETERS	Use good personal hygiene practices.
PERSONAL PROTECTION EQUIPMENT	

EYE/ FACE PROTECTION	RESPIRATORY PROTECTION	HAND PROTECTION	BODY PROTECTION
Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles.	Use appropriate respiratory protection where atmosphere exceeds recommended limits	Use chemical resistant gloves appropriate to conditions of use. Wear heat protective gloves and clothing if there is a potential for contact with heated material.	Protective clothing such as long sleeves or a lab coat should be worn

9. PHYSICAL AND CHEMIAL PROPERTIES

APPEARANCE	ODOUR	PHYSICAL STATE	BOILING POINT
Pellets, Spheres	Odourless	Solid	NA
MELTING / FREEZING POINT	SPECIFIC GRAVITY (AT20^{0}C) (WATER=1)	PH	SOLUBILITY IN WATER (AT 30^{0}C)
115-130 ^{0}C	0.91-0.93	NA	Insoluble
VAPOUR PRESSURE (AT 20^{0}C) IN MM Hg	VAPOUR DENSITY (AIR=1)	OTHER INFORMATIONS	VISCOSITY
NA	NA		NA

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID	Avoid contact with strong oxidizers, excessive heat, sparks or open flame
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE	Strong oxidising agents
HAZARDOUS DECOMPOSITION PRODUCTS	Not expected to decompose under normal condition
HAZARDOUS POLYMERIZATION	Not likely

11. TOXICOLOGICAL INFORMATION

ANIMAL TOXICITY DATA	
ORAL: LD50 IN (rat) mg/kg: NA	DERMAL: LD50 (rabbit)µL/kg: NA
IRRITANCY OF PRODUCT	Mechanical irritation to eye is possible
REPRODUCTIVE TOXICITY INFORMATION	
REPRODUCTIVE TOXICITY	No adverse effects
MUTAGENICITY	No adverse effects
EMBRYOTOXICITY	No adverse effects
TERATOGENICITY	No adverse effects

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY	This material is not expected to be readily biodegradable.
EFFECT OF MATERIAL ON PLANTS OR ANIMALS	Ecotoxicity is expected to be minimal based on the low water solubility of polymers.
EFFECT OF CHEMICAL ON AQUATIC LIFE	This material is not volatile &it is insoluble in water. It is not expected to be harmful to fish or

	bacteria.

13. DISPOSAL CONDSIDERATIONS

WASTE DISPOSAL METHODS	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40CFR parts 261.3. Additionally; waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

	PROPER SHIPPING NAME	HAZARD CLASS	IDENTIFICATION NUMBER	PACKING GROUP	LABEL REQUIRED	REMARKS
DOT	NA	NA	NA	NA	NA	Not controlled under DOT
TDG	NA	NA	NA	NA	NA	Not controlled under TDG
IMDG	NA	NA	NA	NA	NA	Not controlled under IMDG
ICAO	NA	NA	NA	NA	NA	Not controlled under ICAO

15. REGULATORY INFORMATION

INDIAN REGULATION	Manufacture Import & Storage of hazardous chemical rules. Amended as on 2000
INTERNATIONAL REGULATIONS	
TSCA INVENTORY STATUS	X
WHMIS CLASSIFICATION	-
CANADIAN INVENTORY STATUS	-
EINECS INVENTORY STATUS	X
AUSTRALIAN INVENTORY STATUS	X
JAPAN INVENTORY STATUS	X
X= All components are included or are otherwise exempt from inclusion on this inventory. Contact HPL for additional information	

16. OTHER INFORMATION

DISCLAIMER	Information contained in this material safety data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the user/ distributor to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/ handled or sold by him as the case may be. HPL makes no warranties, expressed or implied, in respect of the adequacy of this document for any particular purpose.