

# **Safety Data Sheet**

PT. Lotte Chemical Titan Nusantara. (Formerly known as PT TITAN Petrokimia Nusantara) Head Office : Setiabudi 2 Building Lt 3, Suite 306-307 Jl HR Rasuna Said Kav 62, Jakarta - 12920, Indonesia Phone: +62 21 52907008 Fax: +62 21 52907281 Site Location : Jl. Raya Merak Km.116 Cilegon 42436, Banten Indonesia Phone +62 254 572 468 Fax : +62 254 571290 Email: tsc@lottechem.co.id Website : www.lottechem.co.id Phone +62 254 572 468 Fax : +62 254 571290

## 1. PRODUCT AND COMPANY IDENTIFICATION

SDS Code Trade Name Grade Name Manufacturer/Supplier Address	PE-002 Titanvene <sup>™</sup> LINEAR LOW DENSITY POLYET LL0209SC PT. Lotte Chemical Titan Nusantara Head Office : Setiabudi 2 Building 3rd floor, Suite 306-307 Jl. HR. Rasuna Said Kav.62, Kuningan Jakarta, 12920 Indonesia.	HYLENE <b>Merak Works :</b> Jl. Raya Merak Km.116 Rawa Arum, Pulo Merak Cilegon 42436, Banten, INDONESIA
Telephone Number Facsimile Number Emergency Telephone Number	+62 21 52907008 +62 21 52907281 +62 254 571333 ext.2222	+62 254 571333 +62 254 572468
2. HAZARD IDENTIFICATION		
Main Hazard Health Effects – Eyes	Not classified as hazardous Fine dust may cause irritation to the outer surface of the eye. Fumes from the heated material may cause lacrimation and severe irritation. Contact with hot material may cause thermal burns.	
Health Effects – Skin	Material not normally an irritant, however, repeated or prolonged contact may cause some irritation. Fumes from the heated material may be severely irritating and corrosive. Contact with hot material may cause thermal burns.	
Health Effects – Ingestion	Inert material regarded as harmless by ingestion (Ingestion is not considered a normal route of exposure).	
Health Effects – Inhalation	Dust may cause respiratory tract irritation. See sections 7 and 8. If heated to more than 300°C, the product may form vapors or fumes, which could cause	

#### 3. COMPOSITION / INFORMATION ON THE COMPONENTS

Product Trivial Name	Linear Low Density Polyethylene (LLDPE)
Product Formal Name	Ethene-butene-1 copolymer
Product Chemical Family	Polyolefin

Component	CAS Number	Amount
Ethene-butene-1 copolymer	25087-34-7	< 100% Weight
Additive	Various	< 3% Weight

**REACH Registration Number** 

Ethylene

: 01-2119462827-27-0136

irritation of the respiratory tract, coughing and shortness of breath.



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4. FIRST AID MEASURES		
First Aid – Eyes	Immediately flood the eyes with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists. Wash skin thoroughly with soap and water, obtain medical attention if irritation persists. If burned by contact with hot material, flush skin immediately with large amounts of cold water. If possible, submerge area in cold water. No attempt should be made to detach polymer adhering to the skin or to remove	
First Aid – Skin		
First – Aid – Ingestion First – Aid – Inhalation	clothing attach with molten material. Thermal burns require immediate medical attention. In case of ingestion of large quantities, get medical attention. If affected by fumes from heated material, remove from source of exposure and move the affected person into fresh air. Obtain medical attention if the symptoms continue.	
5. FIRE FIGHTING MEASURES		
Extinguishing Media	Use water spray, foam, carbon dioxide (use for live electrical installation), or dry chemical (post hazard concern).	
Unsuitable Extinguishing Media	Do not use direct water jets in the early stages of extinguishing a fire as this may help to spread the flames.	
Special Hazards of Products	Do not use water extinguishers in close proximity to live electrical installations. Hazardous combustion products may include carbon monoxide, small quantities of aldehydes, and may also produce molten polymer and black smoke. See Section 8.	
Protective Equipment for Fire Fighting	Wear full protective clothing and self-contained breathing apparatus.	
6. ACCIDENTAL RELEASE MEASU	IRES	
Personal Precautions Environmental Precautions	Granules spilled on the floor can cause slipping. Avoid creating a dust cloud. If the material has been released into a stream or a public sewer or other drainage	
Spillage	system inform the appropriate authorities. Transfer into suitable containers for recovery or disposal.	
7. HANDLING AND STORAGE		
Handling	Safety glasses are recommended for handling pellets and also thermally resistant gloves for processing hot materials. Avoid contact with heated or other molten products. Thermal burns are the most	
	common injury caused while processing molten LLDPE. There is a risk of being splashed with molten materials, for example when purging or starting up an extruder or injection molding machine.	
	Do not inhale fumes or vapor from molten product. Use local exhaust ventilation over processing area. LLDPE materials, especially in powder form, can give rise to dust during handling.	
	LLDPE dust is a nuisance dust (see Section 8) and is classified as flammable. As a consequence, generation and accumulation of dust, for instance in cutting or granulating area, must be avoided.	
Storage	Pneumatic conveying of powder and pellets can generate large static electrical charges. Electrical discharge in presence of air can cause an explosion. Earth all equipment. Store LLDPE materials on safe storage design.	
	Store at ambient temperature in a dry and ventilated area. Do not store near highly flammable material, and store away from sources of heat. Keep away from direct sunlight (see also Section 8).	
	The main hazards are related to pallet stock slippage and forklift truck maneuvers, which can cause injury to personnel. It is recommended that adequate procedures covering storage and handling of pallets are established and maintained. These procedures must be kept up to date and regularly audited.	
	Pellet spills should be swept up immediately to prevent slipping.	



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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Standards	Always consult the officially published Exposure Standard list when applying		
	occupational exposure standards.		
	Nuisance dust TLV : 10mg/m <sup>3</sup> (ACGIH)		
	Limits for the hazardous decomposition products (see Section 10) :		
	Carbon monoxide : UK EH40 : OES 35mg/m <sup>3</sup> 8h TWA		
	Carbon dioxide : UK EH40 : OES 9150mg/m <sup>3</sup> 8h TWA		
	Acrolein : UK EH40 : OES 0.23mg/m <sup>3</sup> 8h TWA		
	UK EH40 : OES 0.70mg/m <sup>3</sup> 15 min TWA		
	Formaldehyde : UK EH40 : MEL 2.5mg/m <sup>3</sup> 8h TWA. A2 Carcinogen		
	Reference :		
	UK EH40, Occupational exposure Limits, Health and Safety Executive,		
	HSE Books. PO Box 1999, Sunbury, Suffolk CO10 6FS, UK		
	Phone +44 1787 881165, Fax +44 1787 313995		
	ACGIH Threshold Limit Values Publications Department, ACGIH		
	1330 Kemper Meadow Drive, Cincinnati, OH 4520-1634, USA.		
	Phone +1 513 7422020, Fax +1 513 7423355		
Engineering Control Measures	Use only in well-ventilated area, minimum 6 air changes per hour.		
Respiratory Protection	Product processing, heat sealing of LLDPE film, or operations involving the use of wires		
	or blades heated above 300°C may produce dust, vapor or fumes. To minimize risk of		
	overexposure to dust, vapor or fumes, it is recommended that a local exhaust system is		
	placed above the equipment, and that the working area is properly ventilated.		
Hand Protection	Direct contact with LLDPE materials does not normally lead to skin irritation. However,		
	unnecessary contact with the material should be avoided. Employees with a history of		
	skin disease or allergy should receive medical clearance prior to employment involving		
	direct contact with the material.		
Eye Protection	If there is risk of exposure to dust or splashing material, safety glasses should be worn.		
Body Protection	Standard work clothes and safety shoes.		

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Color Melting Point (°C) Flash Point (PMCC) (°C) Solubility in Water (kg/m<sup>3</sup>) Density (kg/m<sup>3</sup>) Auto-flammability (°C) Dust Explosion Data Softening Point (°C) Solubility in Other Solvent Normally delivered as granules White or translucent Melts between 122°C and 130°C Above 300°C decomposition occurs and flash or fumes may occur Insoluble 915 – 930 (ISO 1183) 350°C Minimum ignition temperature 400°C 95°C – 120°C (VICAT) Aromatics at elevated temperatures

## **10. STABILITY AND REACTIVITY**

#### Stability

Stable, although heating above 300°C in air may produce carbon monoxide, hydrocarbon, aldehydes such as acrolein and formaldehyde and organic acids. Processing equipment should be provided with local exhaust ventilation.

#### 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Skin Sensitization Sub-acute/Sub-chronic Toxicity No evidence of acute toxicity reported. No known reports of skin sensitization. No reports of adverse long-term effects following repeated exposures.



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12. ECOLOGICAL INFORMATION	
Mobility Persistence/Degradability Bio-accumulation Ecotoxicity	If released to water the product will float. The material is not biodegradable. Product is not expected to bioaccumulate. The material is not toxic.
13. DISPOSAL	
Product Disposal Container Disposal	Recover or recycle if possible. Otherwise, incinerate in appropriate incinerators with energy recovery, or dispose of in landfills in accordance with local regulations. Empty containers should be recovered for reuse or recycling or disposed of in landfills in accordance with local regulations.
14. TRANSPORT INFORMATION	
UN – Class ADR/RID – Class IMDG – Class IATA – Class	Not classified Not classified Not classified Not classified
15. REGULATORY INFORMATION	
Labeling Information R Phrases S Phrases EINECS Listing EC Annex I Number EC Annex I Classification TSCA Listing AICS/NICNAS Listing DSL/NDSL (Canadian) Listing	Not applicable Not applicable Polymer, exempt from listing Not listed Not classified according to EC Directives 67/548/EC and 1999/45/EC Yes Yes DSL listed
16. OTHER INFORMATION	
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