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

MSDS Code	PE-001	
Trade Name	Titanvene™ HIGH DENSITY POLYETHYLENE	
Grade Name	**HD5211EA-B**	
Manufacturer/Supplier	PT. Lotte Chemical Titan Nusantara	
Address	**Head Office :** Setiabudi 2 Building 3rd floor, Suite 306-307 Jl. HR. Rasuna Said Kav.62, Kuningan Jakarta, 12920 Indonesia.	**Merak Works :** Jl. Raya Merak Km.116 Rawa Arum, Pulo Merak Cilegon 42436, Banten, INDONESIA
Telephone Number	+62 21 52907008	+62 254 571333
Facsimile Number	+62 21 52907281	+62 254 572468
Emergency Telephone Number	+62 254 571333 ext.2222	

2. HAZARD IDENTIFICATION

Main Hazard	Not classified as hazardous
Health Effects – Eyes	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 300ºC, the product may form vapors or fumes, which could cause irritation of the respiratory tract, coughing and shortness of breath.

3. COMPOSITION / INFORMATION ON THE COMPONENTS

Product Trivial Name High Density Polyethylene (HDPE)

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

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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.
First Aid – Skin	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 clothing attach with molten material. Thermal burns require immediate medical attention.
First – Aid – Ingestion	In case of ingestion of large quantities, get medical attention.
First – Aid – Inhalation	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. Do not use water extinguishers in close proximity to live electrical installations.
Special Hazards of Products	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 MEASURES

Personal Precautions	Granules spilled on the floor can cause slipping. Avoid creating a dust cloud.
Environmental Precautions	If the material has been released into a stream or a public sewer or other drainage system inform the appropriate authorities.
Spillage	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 HDPE. 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. HDPE materials, especially in powder form, can give rise to dust during handling. HDPE 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. 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.
Storage	Store HDPE 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^3 (ACGIH)
Limits for the hazardous decomposition products (see Section 10) :
Carbon monoxide : UK EH40 : OES 55mg/m^3 8h TWA
Carbon dioxide : UK EH40 : OES 9000mg/m^3 8h TWA
Acrolein : UK EH40 : OES 0.25mg/m^3 8h TWA
UK EH40 : OES 0.80mg/m^3 15 min TWA
Formaldehyde : UK EH40 : MEL 2.5mg/m^3 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 HDPE film, or operations involving the use of wires or blades heated above 300ºC 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 HDPE 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	Normally delivered as granules
Color	White or translucent
Melting Point (ºC)	Melts between 126ºC and 134ºC
Flash Point (PMCC) (ºC)	Above 300ºC decomposition occurs and flash or fumes may occur
Solubility in Water (kg/m^3)	Insoluble
Density (kg/m^3)	930 – 960 (ISO 1183)
Auto-flammability (ºC)	350ºC
Dust Explosion Data	Minimum ignition temperature 400ºC
Softening Point (ºC)	110ºC – 128ºC (VICAT)
Solubility in Other Solvent	Aromatics at elevated temperatures

10. STABILITY AND REACTIVITY

Stability

Stable, although heating above 300ºC 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	No evidence of acute toxicity reported.
Skin Sensitization	No known reports of skin sensitization.
Sub-acute/Sub-chronic Toxicity	No reports of adverse long-term effects following repeated exposures.

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12. ECOLOGICAL INFORMATION

Mobility	If released to water the product will float.
Persistence/Degradability	The material is not biodegradable.
Bio-accumulation	Product is not expected to bioaccumulate.
Ecotoxicity	The material is not toxic.

13. DISPOSAL

Product Disposal	Recover or recycle if possible. Otherwise, incinerate in appropriate incinerators with energy recovery, or dispose of in landfills in accordance with local regulations.
Container Disposal	Empty containers should be recovered for reuse or recycling or disposed of in landfills in accordance with local regulations.

14. TRANSPORT INFORMATION

UN – Class	Not classified
ADR/RID – Class	Not classified
IMDG – Class	Not classified
IATA – Class	Not classified

15. REGULATORY INFORMATION

Labeling Information	
R Phrases	Not applicable
S Phrases	Not applicable
EINECS Listing	Polymer, exempt from listing
EC Annex I Number	Not listed
EC Annex I Classification	Not classified according to EC Directives 67/548/EC and 1999/45/EC
TSCA Listing	Yes
AICS/NICNAS Listing	Yes
DSL/NDSL (Canadian) Listing	DSL listed

16. OTHER INFORMATION

MSDS Data Revision	April 2018
Next Evaluation	April 2021
MSDS Distribution	The information in this document shall be made available to all who may handle Titanvene™ HIGH DENSITY POLYETHYLENE products
Notice	This material Safety Data Sheet is based upon data considered to be accurate as at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of the product.