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MATERIAL SAFETY DATA SHEET

PP

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ISSUE NO. : 2

MATERIAL GRADE: TITANPRO POLYPROPYLENE COPOLYMER

I. PRODUCT IDENTIFICATION

Product Group: Polypropylene Copolymer in pellet form with content less than 1% additives.

II. COMPOSITION AND PHYSICAL DATA

Base Resin: Ethylene-Propylene Copolymer.
TSCA Registry: CAS # 9010-79-1.

III. HAZARDS IDENTIFICATION

As Titan Petchem (M) Sdn Bhd. interprets the U.S. Occupational Safety and Health Act and Regulations, including the Hazard Communication Standard 29 CFR 1910.1200 dated November 25, 1983, these product should NOT be considered hazardous materials.

<u>Hazardous Material Identification System</u>	<u>Rating</u>
Health Hazard:	0 Minimal
Flammability hazard	1 Slight
Reactivity hazard	0 Minimal

*N/A: Not applicable

IV. FIRST AID MEASURES

Molten resins: If molten material comes into contact with the skin, immerse skin under a running stream of water until cooled. **DO NOT** attempt to remove the resin from the skin. Removal can result in tissue damage. Get immediate medical attention.



V. FIRE FIGHTING MEASURES

Autoignition temperature:	>357°C (675°F)
Flash point:	>329°C (625°F)
Flammable limit:	N/A
Extinguishing media:	Water spray, dry chemical, foam or carbon dioxide
Special fire-fighting procedures:	Standard procedures for class A fires
Unusual fire & explosion hazard:	None
Stability considerations:	Stable

VI. ACCIDENTAL RELEASE MEASURES

Spill and leak procedures: Sweep up spilled material for use or disposal. Good housekeeping must be maintained to avoid potential slipping problem.

CAUTION: Keep walking surfaces free of spilled material to avoid a slipping hazard.

VII. HANDLING AND STORAGE

Handling and storage precautions:	Keep away from sparks and open flame. This product may react with strong oxidising agents and should not be stored near such materials. Store in sprinkled warehouse. Keep temperature below 60°C (140°F) for <u>quality control</u> .
Protective measures during repair & maintenance:	Eliminate ignition source.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment:	Safety glasses
Work practices:	Eyewash fountains and safety showers should be easily accessible.
Engineering controls:	Provide adequate ventilation. Extruder should be properly vented.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid pellets	% volatile (vol.):	<0.4
Molecular formula:	(C ₃ H ₆) _x	Melting point:	>160°C (320°F)
Boiling point:	N/A*	Solubility in water :	Negligible
Vapor pressure @ 20°C:	N/A*	Specific gravity:	0.88 – 0.92
Vapor density:	N/A*	pH:	N/A*
		Evaporation rate:	N/A*

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X. STABILITY AND REACTIVITY

Stability: Stable
Conditions to avoid: Temperatures above 357°C
Materials to avoid: Strong oxidising agents
Decomposition products: Carbon dioxide, carbon monoxide and organic vapors
Hazardous polymerization: Will not occur

XI. TOXICOLOGICAL INFORMATION

Toxicity to Animals: LD50: Not Available
LC50: Not Available

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified NONE by NTP,
NONE by OSHA. 3(Not classifiable for human.) by IARC.

XII. ECOLOGICAL INFORMATION

Ecotoxicity: Not available
BOD5 and COD: Not available
Biodegradable/OECD: Not available
Mobility: Not available
Toxicity of the products
Of biodegradation: Not available
Special remarks on the
Products of biodegradation: Not available

XIII. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incineration of waste material in a permitted facility in accordance to local, state, and federal regulation is the recommended disposal method. Landfilling in a licensed facility in accordance to local, state and federal regulation is a suitable alternative.

This product is not listed in federal hazardous waste regulations 40CFR 261.33 paragraphs (a) or (f), i.e. chemical products that are considered hazardous if they become wastes. It does not exhibit any of the hazardous characteristics listed in 40 CFR 261 subpart C. State or local hazardous waste regulation may apply if different from the federal.



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XIV. TRANSPORT INFORMATION

DOT Classification for Bulk Shipments (non bulk shipments may differ)	Not a DOT controlled material (United States)
DOT Proper Shipping Name:	Not applicable
UN Number:	Not applicable
Packing Group:	Not applicable
USCG Proper Shipping Name:	Polypropylene
Marine Pollutant:	Not available
Hazardous Substances Reportable Quantity:	Not available
Special Provisions for transport:	Not applicable
TDG Classification:	Not controlled under TDG (Canada)
ADR/RID Classification:	Not controlled under ADR (Europe)
IMO/IMDG Classification:	Not controlled under IMDG
ICAO/IATA Classification:	Not controlled under IATA

XV. REGULATORY INFORMATION

Designation according to EC guidelines:
The material is not subject to classification according to EC lists and other sources of literature known to us.
Observe the normal safety regulations when handling chemicals.
Generally all national regulations regarding this product type apply.

XVI. OTHER INFORMATION

The information supplied has been based upon the current level of information available, for the purpose of specifying the requirements regarding environment, health and safety in conjunction with the product. They are not to be interpreted as a warranty for specific product characteristics.

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