



# Polypropylene, Homopolymer

## Safety Datasheet

Version No. 1.0

Revision Date: 28<sup>th</sup> April 2022

### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product Identifier/ Name:</b> POLYPROPYLENE, HOMOPOLYMER		<b>Other Classifications:</b> <b>Class:</b> Not Classified <b>Petroleum Class:</b> Not Classified <b>Hazard Identification No. (HIN):</b> Not Pertinent	
<b>Product Recommended Use:</b> Manufacturing of plastic components using different conversion processes like extrusion, moulding, compounding etc.			
<b>Manufacturer's Name:</b> Nayara Energy Limited		<b>Supplier's Name:</b> Nayara Energy Limited	
<b>Street Address:</b> Refinery Site, P. O. Box No. 24, Khambhalia Post, Devbhumi Dwarka Dist., Gujarat – 361305, India		<b>Street Address:</b> Refinery Site, P. O. Box No. 24, Khambhalia Post, Devbhumi Dwarka Dist., Gujarat – 361305, India	
<b>City:</b> Jamnagar	<b>State:</b> Gujarat	<b>City:</b> Jamnagar	<b>State:</b> Gujarat
<b>Pin Code:</b> 361305	<b>Emergency Contact:</b> Refinery Shift Manager +91 9979891330	<b>Pin Code:</b> 361305	<b>Emergency Contact:</b> Refinery Shift Manager +91 9979891330
<b>MSDS Preparation Date:</b> 28 <sup>th</sup> April 2022	<b>Prepared By:</b> Tushar Dongre		<b>Contact No:</b> +91 8976844397

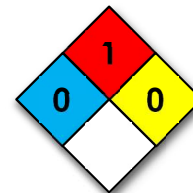
### SECTION 2: HAZARD IDENTIFICATION

#### UN GHS Classifications:

Hazards	Classification	Category
Physical:	Flammable Solid	Category 1
Health:	Not classified	
Environmental:	Not classified	

#### NFPA Rating:


Health Rating	0 (1 for Molten material/ dust)
Flammability Rating	1
Instability/ Reactivity Rating	0
Special Rating	



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GHS Labeling:	<b>Symbol(s):</b> Flame	
		
	<b>Signal Word:</b> Danger	
	<b>Hazard Statements:</b>	
	H228	Flammable solid
	<b>Precautionary Statements:</b>	
	<b>Prevention:</b>	
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking.
	P240	Ground and bond container and receiving equipment.
	P241	Use explosion-proof (electrical/ ventilating/ lighting/ other) equipment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection. Refer Section 8.	
<b>Response:</b>		
P370+P378	In case of fire: Use Foam, Dry powder, Carbon dioxide, Water spray or Sand to extinguish. Refer Section 5.	
<b>Storage:</b>		
	No additional specific requirements. Refer Section 7.	
<b>Disposal:</b>		
	No additional specific requirements. Refer Section 13.	
<b>Other Hazards:</b>		
1. May form combustible dust concentrations in air, if the small particles / powder is generated during usage or transportation of the material or due to any other activity. Maximum size of dust established as explosion risk with low MIE (below 30 mJ) is 75 microns [Source: OSHA Notice, Directive no.: TED-01-00-015, OSHA Technical Manual – Section IV, Chapter 6, Combustible Dusts]		
2. Slipping hazard, if the product granules are spilled on the floor.		
3. May accumulate Electrostatic charges during handling.		

## SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

## Chemical/ Substance Information

Chemical Name	Polypropene			Chemical Formula	(C <sub>3</sub> H <sub>6</sub> ) <sub>n</sub>
Synonyms	1-Propene Homopolymer, PP Homopolymer, PPHP				
CAS Number	9003-07-0	UN No.	Not listed	HAZCHEM Code	Not pertinent
EC Number	618-352-4	Class Petroleum Class	Not Classified	Hazard ID No. (HIN)	Not pertinent

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Polypropylene is manufactured by addition polymerization of propylene monomer in the reactor under low temperature and low pressure using Zeigler Natta or a metallocene catalyst. The polymer formed is pelletized in the extruder where additives are added to stabilize and provide functional properties.

Hazardous Ingredients (Chemical Name)	Concentration (%)	CAS Number	Associated Hazard	Toxicity Information (LD <sub>50</sub> , LC <sub>50</sub> )
Polypropylene Homopolymer, (9003-07-0; 618-352-4)	99 - 100	9003-07-0	Flammable Solid at high temperatures (> 300 °C)	Non Toxic
Additives	< 1.0 %		No adverse health effects	No adverse health effects

## SECTION 4: FIRST-AID MEASURES

<b>Exposure:</b>	✓	Skin Contact	<input type="checkbox"/>	Absorption (Skin)	✓	Eye Contact	✓	Inhalation (Fumes during processing or dust if formed)	✓	Ingestion (Oral)
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## Necessary Measures:

i. On Contact with Skin	No hazard if skin comes in contact with plastic pellets. If the skin comes in contact with the molten material, use plenty of cold water to cool (by spray or immersion). No attempts should be made to remove the molten material from the skin as there is danger of skin peeling. Get immediate medical attention to treat burns.	
ii. On Contact with Eyes	Eye irritation may occur in case if powder or dust enters eyes. Wash the eyes with plenty of water till the irritation disappears. Get medical attention in case if the symptoms persist.	
iii. On Inhalation	Take the affected person to fresh air. If the symptoms persist get medical attention.	
iv. On Ingestion (if swallowed/ mixed with food)	Unlikely to cause any hazard if ingested in small quantities. May cause choking hazard. If the person is conscious, wash mouth with water. DO NOT INDUCE VOMITING or treat with medication unless directed by a medical professional.	
<b>Symptoms/ Effects</b>	Contact with Skin	Severe burns may be caused by molten material.
	Contact with Eye	Dust can cause irritation to eyes. Fumes may cause irritation, redness of eyes.
	Inhalation	Dust and fumes may be irritating to the respiratory system
	Ingestion	May cause choking hazard.
<b>Emergency Treatment</b>	Treat symptomatically. Treat the burns as thermal burns. No special treatment otherwise.	

## SECTION 5: FIRE-FIGHTING MEASURES

<b>Flash Point (CC), °C</b>	> 260	<b>Flash Point (OC), °C</b>	Not determined	<b>Auto-Ignition Temperature, °C</b>	> 390
<b>Suitable Extinguishing Media</b>	Use Foam, Dry powder, Carbon dioxide, Water spray or Sand				
<b>Unsuitable Extinguishing Media</b>	None, be careful when using water jet to not to spread the granules.				
<b>Specific Hazards during Fire</b>	Decomposition products like carbon monoxide, carbon dioxide, aldehydes and smoke may be formed during fire. Dense smoke may be generated when burning in insufficient oxygen levels.				

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<b>Hazardous Combustion Products</b>	Dust dispersed in the air in sufficient concentration may form combustible cloud which may cause explosion hazard in the presence of ignition source like spark.
<b>Special PPE for Fire-Fighters</b>	Wear appropriate firefighting protective clothing. Wear approved self-contained breathing apparatus with full face piece in a positive pressure mode.
<b>Precautions to be taken</b>	Follow all safety precautions for chemical fires. As far as possible, avoid dust generation or dust cloud generation by using low pressure medium fog streams. Firefighting to be done from safe distance using hoses or nozzles. After fire is dozed, use plenty of water to cool the containers before entering the site.
<b>Further Information</b>	In case of fire, isolate the affected area by evacuating the manpower immediately. If found safe, move rest of the material away from the site. Use water spray or fog to cool the exposed containers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Do not take any action if not trained properly. Put on personal protective equipment. Move away from the site and restrict entry of other persons. Shut off ignition source if it is safe to do so. Avoid breathing dust or fumes. Wear respirator if ventilation is not proper. Do not walk on the spilled or molten material. Leave site and gather at safe assembly point. Spilled unmolten material may cause slipping hazard. Barricade the site and evacuate other persons immediately. Use appropriate safety clothing and equipment. Molten material is sticky and may flow. Do not touch or walk on molten material.
<b>Environmental Precautions</b>	Do not flush in to sewers. Prevent entry in to soil, waterways, drains and sewers. Notify concerned authorities if material enters these areas.
<b>Containment &amp; Clean-up Methods</b>	Take the bags / containers away from affected area. Use non sparking tools to protect against static charge accumulation. Do not allow dust deposits. Use vacuum or sweep the surfaces. Do not allow dust to mix in air and form cloud as it may cause explosion hazard. Place the material in designated labelled container to dispose properly. In case of large spills use shovels or vacuum to put the material in to designated labelled container. Do not allow material entry in to waterways or sewers. Ensure all national/local regulations are observed.

## SECTION 7: HANDLING AND STORAGE

<b>Handling</b>	<b>Precautions</b>	Material is normally in pellets or granular form. If it is converted in to fine dust (which is combustible) due to handling or processing, then there are chances that this dust may mix with air and form an explosive dust cloud. This poses an explosion hazard. Avoid dust accumulation. Refer following standard, NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids.
	<b>Safe Handling Instructions</b>	Avoid contact of the material with skin, eyes or clothing. Use appropriate PPEs during handling or processing the material. Wash hands and other exposed body parts with mild soap and water after the work is over or before eating. Molten hot material can cause thermal burns. Always wear thermal protection gloves (> 350° C.), thermal resistant clothing and face

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		shield while processing the material on the machines. Do not breathe fumes or vapours. Ensure proper earthing of the equipment to dissipate static charges.
	<b>Fire/ Explosion Protection</b>	Electrostatic charge may build up during handling, transportation or processing. Always use properly grounded equipment or containers for handling or storing the material. Provide adequate ventilation in the process area and remove any fumes generated during processing, effectively using suitable equipment. Avoid dust generation. In case if it is generated in sufficient quantities, it may form combustible cloud and may pose explosion hazard. With continuous contact with heat, material will melt and may catch fire. Remove the heat source immediately. Wear required PPEs.
<b>Storage</b>	<b>Requirements for Storage Area and Containers</b>	Store the material in original bags or containers away from heat and sunlight in a well ventilated, dry area preferably below 50° C. Eliminate contact with any kind of ignition source or static charge generating substances. After opening the bags, store the material in designated labelled containers. Keep the containers closed or covered to prevent any kind of contamination. While storing in a store room, properly stack the bags. Prevent slippage of bags over each other. Adequate and safe procedures to be followed for handling of bags. Bags can be stacked as per the site specific risk assessment report for safe handling
	<b>Incompatible to</b>	Chlorine, Fuming Nitric Acid, and other Strong Oxidizing agents, Chlorinated Solvents, Aromatics.

## SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

## Exposure Limits:

Component (CAS No.; EC No.)	The Factories Act (India)				OSHA		NIOSH				ACGIH		German TRGS 900	European Limits	
	TLV-TWA		STEL		PEL	STEL	REL	STEL	IDLH	Other	TLV	STEL	MAK	IOELV	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	ppm	ppm	ppm	ppm		ppm	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>

Polypropylene Homopolymer (9003-07-0; 618-352-4) has no recorded Occupational Exposure Limits and is significantly bigger than dust. Limits given hereunder are precautionary:

Respirable Dust	NE	NE	NE	NE	5	NE	NE	NE	NE	NE	3	NE	5	NE	5
Total Dust	NE	10	NE	NE	15	NE	NE	NE	NE	NE	10	NE	NE	NE	10

C – Ceiling Value; NE – Not Established; A1-A4: ACGIH Carcinogen Criteria; Ca – Potential Occupational Carcinogen; BEI – Biological Exposure Index; Card. Sens. – Cardiac Sensitizer; CNS Impair: Central Nervous System Impairment

## Engineering Controls:

**Ventilation** - Proper room ventilation and exhausts to be provided at areas where there are chances of exposure to dust. Exhausts and material handling equipment, where dust generation is expected, are to be designed with proper relief valves to control / prevent explosion hazard.

**Explosion Proofing** – An Oxygen deficient environment is preferred at such locations if possible. Dust collecting equipment should not allow leakage or escape of dust and should be tightly closed. All the electrical equipment should be earthed to ground the static charges developed during usage. Recommend to refer NFPA 654 while designing / selecting these equipment.

**Emergency Response:** Safety showers and eye washers near the expected exposure sites.

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## Personal Protective Equipment (PPE):



<b>Eye Protection</b>	Safety glasses and protective shield are recommended when handling cold material to protect from dust. Chemical Safety Goggles will protect the eyes while handling molten material.
<b>Face Protection</b>	Protective shield is recommended when handling cold material to protect from dust. Face shield will protect the face while handling molten material.
<b>Skin Protection</b>	Wear heat-resistant gloves while processing the material for protection from molten material. No protection required while handling the cold material however protective chemical resistant impervious gloves may be worn, as good industrial practice.
<b>Respiratory Protection</b>	Respirators may be used if the dust exposure limits are exceeded. Wear suitable mask having appropriate filter class as per the nature or particle size and concentration of dust. A respirator may be used if the work conditions demand for the same.
<b>Hygiene Measures</b>	Do not eat, drink or smoke while working or handling the material. Wash hands thoroughly before eating or touching body parts. Non slippery safety shoes to be worn in areas where material leakage is observed.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance							
- Form	Solid pellets / granules						
- Physical State	Solid						
- Size (if solid)	1 to 6 mm						
- Colour	Transparent to White						
Odour	Odourless, Mild odor		Odour Threshold		Mild to nil		
Chemical Formula	(C <sub>3</sub> H <sub>6</sub> ) <sub>n</sub>		Molecular Weight		~ 250000 (42.1 for Monomer)		
pH	NA						
Melting Point, °C	160 - 170		Freezing Point, °C		Not pertinent		
Pour Point	Not pertinent						
Initial Boiling Point, IBP (Boiling Range), °C	Not pertinent						
Flash Point, °C	> 300						
Evaporation Rate	Not pertinent		Percentage Volatiles		< 0.1 %		
Flammability	Will not immediately ignite in contact with flame but will catch fire with little exposure and burn (Combustible Solid).						
Explosion Limits:	LEL, %	Not pertinent	UEL, %	Not pertinent	Range, %	Not pertinent	
Auto-Ignition Temperature, °C	> 390						
Decomposition Temperature, °C	> 300						
Vapour Pressure (RVP)	Not pertinent						
Vapour Density	Not pertinent						
Bulk Density, kg/m <sup>3</sup>	500 - 600						

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<b>Specific Gravity (for water = 1)</b>	0.90 – 0.91
<b>Water Solubility</b>	Insoluble
<b>Other Solubility</b>	At higher temperature is soluble in Xylene, Decalin, Tetralin.
<b>Partition Coefficient: Log K<sub>ow</sub> (n-octanol/ water)</b>	Insoluble in water and n-octanol
<b>Viscosity, Dynamic/ Kinematic</b>	Not pertinent

## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	No known reactivity at room temperature.
<b>Chemical Stability</b>	Stable under normal conditions at room temperature.
<b>Possibility of Hazardous Reactions</b>	No hazardous reaction will take place at normal conditions.
<b>Conditions to Avoid</b>	Avoid heating above 300 °C. If heated above this temperature, it may form fumes and vapours which may cause irritation of respiratory track, coughing and shortness of breath. Avoid dust formation as it may form combustible cloud. Use earthing for all equipment to avoid static electricity hazards. Avoid any form of spark or flame or any source of ignition.
<b>Incompatible Materials</b>	Chlorine, Fuming Nitric Acid, and other Strong Oxidizing agents, Chlorinated Solvents, Aromatics.
<b>Hazardous Decomposition Products</b>	Hazardous decomposition products will not be produced under normal conditions of storage and use. In case of decomposition at higher temperature it will emit carbon dioxide, carbon monoxide, olefinic and paraffinic compounds. Decomposition products include trace aldehyde, alcohols, organic acids, and hydrocarbons.

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Exposure:</b>	<input checked="" type="checkbox"/>	Skin Contact	<input type="checkbox"/>	Absorption (Skin)	<input checked="" type="checkbox"/>	Eye Contact	<input checked="" type="checkbox"/>	Inhalation (Fumes during processing or dust if formed)	<input checked="" type="checkbox"/>	Ingestion (Oral)
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## Symptoms/ Effects:

<b>On Skin Contact</b>	<b>Acute</b>	Not an irritant to skin
	<b>Chronic</b>	No effects determined
	<b>Sensitization</b>	No effects determined
<b>On Contact with Eyes</b>	<b>Acute</b>	Irritation and Redness may be experienced upon physical contact
	<b>Chronic</b>	No effects determined
<b>On Inhalation</b>	<b>Acute</b>	Inhalation of substance dust may affect respiratory tract by irritation
	<b>Chronic</b>	Repeated inhalation of substance dust may cause chronic respiratory irritation.
<b>On Swallowing (Ingestion)</b>	<b>Acute</b>	Substance May pose choking hazard
	<b>Chronic</b>	No effects determined
<b>Aspiration Toxicity</b>		Nontoxic substance
<b>Can Affect (Target Organs)</b>		The substance is not classified as toxic to specific organ



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<b>Medical Conditions that can be worsened</b>	Not established
<b>Acute Toxicity Values:</b>	
<b>Component (CAS/ EC No.)</b>	<b>Toxicity Values</b>
Polypropylene (9003-07-0; 618-352-4)	<b>LD<sub>50</sub>, Oral:</b> > 5000 mg/Kg (Rat) <b>LD<sub>50</sub>, Dermal:</b> Not determined <b>LC<sub>50</sub>, Inhalation:</b> Not pertinent <b>LD<sub>50</sub>, Intraperitoneal:</b> > 110,000 mg/kg (Rat) (CDH) <b>LD<sub>50</sub>, Intravenous:</b> > 99,000 mg/kg (Rat) (CDH)

**Carcinogenicity – Mutagenicity – Reproductive Toxicity (CMR) Effects:**

<b>Carcinogenicity</b>	The substance is not classified as carcinogen
<b>Mutagenicity</b>	Not hazardous, No significant effects.
<b>Teratogenicity</b>	Not hazardous, No significant effects.
<b>Reproductive Toxicity</b>	Not hazardous, No significant effects.
<b>Other Effects</b>	Not hazardous, No significant effects.

**SECTION 12: ECOLOGICAL INFORMATION**

<b>Eco-Toxicity</b> (IUCLID)	Animals or aquatic life may consume the pellets or articles made from it like films or small molded parts. Though it is not toxic in nature, it may cause blockage of respiratory or digestive system leading to discomfort, choking or other medical problems.
<b>Biodegradability</b>	Not biodegradable.
<b>Persistence – Bioaccumulation Potential - Toxicity (PBT) Assessment:</b>	
- <b>Persistence</b>	The material is insoluble in water and is inert to the environment. Surface may photodegrade but is not biodegradable.
- <b>Bioaccumulation Potential</b>	Not expected to bio accumulate.
- <b>Toxicity</b>	Not a toxic material.
<b>Soil Effects/ Mobility</b>	Has low mobility in soil.
<b>Other Adverse Effects to Environment</b>	The material is not biodegradable and is insoluble in water. If not disposed properly, the material will remain in the soil or in water for a long time. In case the material is consumed by animals, it may cause obstruction to intestinal tract.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Disclaimer:** The information in this Safety Data Sheet pertains only to the product as shipped. Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may/ does not meet the criteria of a hazardous waste as defined by the National or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, disposal methods may be guided by the prevalent laws.

<b>Waste Residue</b>	Material to be recycled where ever possible. Non-recyclable material to be properly packed, labeled and disposed off as per local / national regulations. Incineration and energy recovery may be done as per local / national regulations. Disposal in land fill should be as per local / national regulations. Do not allow entry in to water, soil, sewers or drainage.
<b>Handling</b>	Wear gloves while handling to prevent irritation due to powder deposition. Use thermal protective gloves while handling hot molten material.
<b>Product Disposal</b>	Material to be recycled where ever possible. Non-recyclable material to be properly packed, labeled and disposed off as per local / national regulations. Incineration and energy recovery may be done as per local / national regulations. Disposal in land fill should be as per local /



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	national regulations. Do not allow entry in to water, soil, sewers or drainage.
	<b>Hazardous Waste ID:</b> NA <b>Basel No:</b> NA
<b>Packaging Disposal</b>	Packaging should be recycled as per local / national regulations. Packaging may be rinsed, washed and recycled. Non-recyclable material to be properly packed, labeled and disposed off as per local / national regulations.

## SECTION 14: TRANSPORT INFORMATION

Disclaimer: The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages. Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.). Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the Safety Datasheet and the bill of lading.

## The Central Motor Vehicle Rules (1989) (and OISD-STD-114)

Chemical Name	Poly(propene)	No Pictogram required
Hazard Class	Not classified.	
UN Number	Not Pertinent	
Packing Group	Not Pertinent	
Labels Required	Not Pertinent	

## UN Transport of Dangerous Goods(TDG)/ U. S. Department of Transportation (DOT)

Proper Shipping Name	Poly(propene)	No Pictogram required
Hazard Class	Not classified.	
UN Number	Not Pertinent	
Packing Group	Not Pertinent	
Labels Required	Not Pertinent	

## International Maritime Organization (IMO)/ International Maritime Dangerous Goods (IMDG)

Proper Shipping Name	Poly(propene)
Hazard Class	Not classified.
UN/ NA Number	Not Pertinent
Packing Group	Not Pertinent
EmS Number	Not Pertinent
Labels Required	Not Pertinent

## Other International Regulations (ADR/RID/ADN – Europe, MARPOL 73/78, IBC Code etc)

This product is not regulated under ADR/ RID/ADN as it is not regulated under UN Code.

## SECTION 15: REGULATORY INFORMATION

Based on the listed chemical/ components, the following regulations may apply:

## Indian Laws:

1. Chemical Accidents (Emergency Planning, Preparedness and Response) Rules (CA-EPPR), 1996
2. Hazardous Substances (Classification, Packaging and Labeling) Rules (Draft), 2011: Not listed
3. Manufacture, Storage, Import of Hazardous Chemicals Rules (MSIHC), 1989: Substance not listed.
4. The Central Motor Vehicles Rules, 1989

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5. The Factories Act 1948
6. The Major Accident Hazard Control Rules, 1997
7. The Petroleum Act, 1934; and Petroleum Rules, 2002
8. The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008
9. The product complies with Indian Standard IS 10910 on "Specification for polypropylene and its copolymers for safe use in contact with foodstuffs, pharmaceuticals and drinking water.
10. It also conforms to IS 16738:2018 on positive list of constituents for polypropylene, polyethylene and their copolymers for its safe use in contact with foodstuffs and pharmaceuticals.

## International Regulations:

1. Superfund Amendments and Reauthorization Act (**SARA**) Title III : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, dust if formed is classified as combustible dust as per SARA 311/312 classification.
2. U.S. **OSHA HAZCOMM** (Hazard Communication) Standard, Resource Conservation and Recovery Act (**RCRA**): Substance not listed.
3. Canadian Workplace Hazardous Materials Information System (**WHMIS**): Not a dangerous product according to HPR classification criteria
4. European Inventory of Existing Chemicals (**EINECS**): Not listed
5. E. U. Directives (includes: 2008/12/EC, 2012/18/EU, 67/548/EEC, 1999/45/EC, Reg. No. 1272/2008 Annex. VI, EU 10/2011, 2011/65/EU – Annexure II, 1907/2006/EC)

**RISK PHRASES:** R11**SAFETY PHRASES:** S3, S9, S16, S22, S33, S37/39, S41

6. German Technical Rules for Hazardous Substances (**TRGS 900, TRGS 903**): Not listed
7. U.S. National Toxicological Program (**NTP**): Not listed
8. International Agency for Research on Cancer (**IARC**): Group 3: Unclassifiable as to carcinogenicity in humans.
9. FDA Regulation: The product complies with the FDA CFR Title 21, 177.1520 Olefin polymer. The additives incorporated in it comply with FDA CFR Title 21, 178.2010.
10. United States Toxic Substances Control Act (TSCA): All chemical substances in this product are either on the TSCA Active Inventory, or in compliance with the inventory.
11. New Zealand Inventory of Chemicals (NZIoC): No restrictions
12. Montreal Protocol (Annexes A, B, C, E): Not listed
13. Stockholm Convention on Persistent Organic Pollutants: Not listed
14. Rotterdam Convention on Prior Informed Consent (PIC): Not listed
15. UNECE Aarhus Protocol on POPs and Heavy Metals: Not listed

The Safety Datasheet format is also based on the American National Standards Institute (ANSI) Z400.1: Hazardous Industrial Chemicals-Material Safety Data Sheets-Preparation), and the United Nations' Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Information can also be found on European Chemical Substances Information System (ESIS), U. S. DOT's Emergency Response Guidebook (ERG) and the International Uniform Chemical Informational Database (IUCID)

## SECTION 16: OTHER INFORMATION

Disclaimer: This version replaces all previous versions. The information in this Safety Data Sheet pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. No warranty of fitness for any particular purpose, expressed or implied, is made concerning the information provided herein. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

## Version History:

Version No.	Dated	Comments
1.0	28 April 2022	New Product SDS created

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## Key or Legend to Abbreviations and Acronyms used in the Safety Data Sheet

<=	Less Than or Equal To	IUCLID	International Uniform Chemical Informational Database
>=	Greater Than or Equal To	LEL	Lower Explosion Limit
ACGIH	American Conference of Government Industrial Hygienists	LOAEL	Lowest Observed Adverse Effect Level
AICS	Australia, Inventory of Chemical Substances	MAK	Germany, Maximum Concentration Values
CAA	U. S. Clean Air Act [112 (r)]	MARPOL	The International Convention for the Prevention of Pollution from Ships, 1973 modified in 1978
CAS	Chemical Abstract Service	MSIHC	Manufacture, Storage, Import of Hazardous Chemicals Rules
CERCLA	U. S. Comprehensive Environmental Response, Compensation, and Liability Act	NFPA	National Fire Protection Agency
CNS	Central Nervous System	NIOSH	National Institute for Occupational Safety & Health
DOT	U. S. Department of Transportation	NOAEL	No Observable Adverse Effect Level
DSL	Canada, Domestic Substances List	NOEC	No Observed Effect Concentration
EC50	Effective Concentration	NTP	U. S. National Toxicology Program
EGEST	EOSCA Generic Exposure Scenario Tool	NZIoC	New Zealand Inventory of Chemicals
EINECS	European Inventory of Existing Chemical Substances	OISD	Oil Industry Safety Directorate
ENCS	Japan, Inventory of Existing and New Chemical Substances	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EPCRA	U.S. Emergency Planning & Community Right-to-Know Act (Sec. 302: Extremely Hazardous Substances; Sec. 313: Toxic Chemicals)	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
IARC	International Agency for Research on Cancer	RoHS	Restriction of Hazardous Substances
IC50	Inhibition Concentration 50%	SARA	U.S. Superfund Amendments and Reauthorization Act, Title III – List of Lists
IDLH	NIOSH, Immediately Dangerous to Life and Health	STEL	Short-term Exposure Limit
IMDG	International Maritime Dangerous Goods	TLV	Threshold Limit Value
IMO	International Maritime Organization	TRGS	German Technical Rules for Hazardous Substances
KECI	Korea, Existing Chemical Inventory	TWA	Time Weighted Average
LC50	Lethal Concentration 50%	UEL	Upper Explosion Limit
LD50	Lethal Dose 50%	WHMIS	Workplace Hazardous Materials Information System