1055 Corporate Center Drive
Oconomowoc, WI 53066 USA
Phone: 262.560.5700
Fax: 877-985-3947
www.lewisbins.com

Dear LEWISBins+ Customer;

Thank you for your interest in our products. You recently requested a Material Safety Data Sheet (MSDS) for the products we supply your facility.

Our products fall under an MSDS exemption since they are considered an “article” per the Federal Occupational Safety and Health Administration. (An excerpt of the OSHA Rule (29 C.F.R. Section 1910.1200) is printed below.)

1910.1200(b)(6)(v)(c) Hazard communication.

> "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

To assist you in your request for material information I have included an MSDS that is typical of the base materials in the products we manufacture for your company. We cannot certify that this is from the specific manufacturer who supplied the resin at the time we produced your product but it will help you in your analysis of the material.

If you should have additional questions or require additional information, please feel free to call your sales person or contact me directly at 262-560-5297. Thank you for allowing us the opportunity to be of service.

Regards,

Robert Nussbaum
Director New Product Development

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: **GENERAL HOMOPOLYMER AND COPOLYMER POLYPROPYLENE**
Product Description: Polyolefin, see Section 16 for applicable grades.

Intended Use: Extrusion and moulding

COMPANY IDENTIFICATION

Supplier: **EXXONMOBIL CHEMICAL COMPANY**
P.O. BOX 3272
HOUSTON, TX. 77253-3272 USA

24 Hour Health Emergency	(800) 726-2015
Transportation Emergency Phone	(800) 424-9300 or (703) 527-3887 CHEMTREC
Product Technical Information	(281) 870-6000/Health & Medical (281) 870-6884
Supplier General Contact	(281) 870-6000

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

No Reportable Hazardous Substance(s) or Complex Substance(s).

NOTE: The product may contain varying levels of additives such as slip and antiblocking agents, antioxidants and stabilizers.

SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

WARNING: May form combustible dust concentrations in air (during processing/handling). Spilled pellets present a slipping hazard on hard surfaces. Thermal burn hazard - contact with hot material may cause thermal burns. Material can accumulate static charges which may cause an ignition.

POTENTIAL HEALTH EFFECTS

If dust is generated, it could scratch the eyes and cause minor irritation to the respiratory tract. When heated, the vapors/fumes given off may cause respiratory tract irritation.

NFPA Hazard ID:	Health:	1	Flammability:	1	Reactivity:	0
HMIS Hazard ID:	Health:	1	Flammability:	1	Reactivity:	0

SECTION 4 FIRST AID MEASURES

INHALATION

At ambient/normal handling temperatures, no adverse effects due to inhalation of dust are expected. In case of adverse exposure to vapors and / or aerosols formed at elevated temperatures, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest.

SKIN CONTACT

Wash contact areas with soap and water. For hot product: Immediately immerse in or flush affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

No adverse effects due to ingestion are expected.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Use standard firefighting procedures and consider the hazards of other involved materials. Assure an extended cooling down period to prevent re-ignition. Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Explosion: Avoid generating dust; fine dust dispersed in air in sufficient concentration and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon, Flammable hydrocarbons

FLAMMABILITY PROPERTIES

Flash Point [Method]: N/A
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/A

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The

National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (for example, clearing dust surfaces with compressed air). Prevent dust exposure to ignition sources. For example, use non-sparking tools and prohibit smoking, flares, sparks or flames in immediate area. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Spilled pellets present a slipping hazard on hard surfaces. Prevent dust cloud. Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas. For Large Spills: Cover spill with plastic sheet or tarpaulin to minimize spreading.

SECTION 7 HANDLING AND STORAGE

HANDLING

Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dust from material can accumulate electrostatic charges due to friction from transfer and mixing operations and cause an electrical spark (ignition source). Provide adequate precautions to ignition sources, such as electrical grounding and bonding, inert atmosphere or non-sparking tools. However, bonding and grounds may not eliminate the hazard for static accumulation. Consult local applicable standards for guidance. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids and EN 61241, Electrical Apparatus for Use in the Presence of Combustible Dust for safe handling. Avoid elevated temperatures for prolonged periods of time. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent small spills and leakage to avoid slip hazard. Care should be taken when storing and handling this product. Apart from the specific nature of the polymer product, conditions such as humidity, sunlight, and temperature have an influence on the way the product behaves during storage and handling. Special attention should be paid to avoid inappropriate stacking of palletized bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions. Avoid conditions generating heat during transfer operations.

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]
Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation.
Storage Temperature: [Ambient]
Storage Pressure: [Ambient]

Suitable Containers/Packing: Bulk Containers; Bags; Drums; Hopper Cars; Octatainer; Silos
Suitable Materials and Coatings (Chemical Compatibility): Aluminum; Polyethylene

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: For dusty conditions, OSHA recommends for particulates not otherwise regulated an 8-hour TWA of 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction); ACGIH recommends for insoluble and poorly soluble particles not otherwise specified an 8-hour TWA of 10 mg/m3 (inhalable particles), 3 mg/m3 (respirable particles).

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. SPECIAL PRECAUTIONS: Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products which may evolve at elevated temperatures (for example, oxygenated components). Processors of this product should assure that adequate ventilation or other controls are used to control exposure. It is recommended that the current ACGIH-TLVs for thermal degradation by-products be observed. Contact your local sales representative for further information. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product are designed and maintained to minimize dust generation and accumulation. Ensure that dust-handling systems (such as exhaust ducts, dusts collectors, vessels, and processing equipment) are designed to minimize the potential for dust ignition and prevent explosion propagation. For example, use explosion relief vents, an explosion suppression system or inert equipment internals. Additional examples of proper equipment include using only appropriately classified electrical equipment and powered industrial trucks.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Particulate air-purifying respirator approved for dust / oil mist is recommended.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If product is hot, thermally protective, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If product is hot, thermally protective, chemical resistant apron and long sleeves are recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Solid
Form: Pellet, Granule
Color: Clear to Opaque, White to Off-White
Odor: None to Mild
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density: N/D
Bulk Density: 0.4 g/cc at 20 °C - 0.7 g/cc at 20 °C
Density: 890 kg/m³ (7.43 lbs/gal, 0.89 kg/dm³) - 920 kg/m³ (7.68 lbs/gal, 0.92 kg/dm³)

Flash Point [Method]: N/A
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/A
Boiling Point / Range: N/A
Vapor Density (Air = 1): N/A
Vapor Pressure: N/A
Evaporation Rate (n-butyl acetate = 1): N/A
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/A
Solubility in Water: Negligible
Viscosity: N/A
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/A
Melting Point: 130°C (266°F) - 170°C (338°F)
Hygroscopic: No
Decomposition Temperature: N/D

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid elevated temperatures for prolonged periods of time.

MATERIALS TO AVOID: Strong oxidizers, Fluorine

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity: No end point data for material.	Minimally Toxic. Based on chemical structure (polymers).
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Toxicity: No end point data for material.	Minimally Toxic. Based on chemical structure (polymers).
Skin	
Toxicity: No end point data for material.	Minimally Toxic. Based on chemical structure (polymers).
Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on chemical structure (polymers).
Eye	
Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on chemical structure (polymers).

CHRONIC/OTHER EFFECTS

For the product itself:

Dust may be irritating to the eyes and respiratory tract.
Elevated temperatures or mechanical action may form vapors, mists or fumes which may be irritating to the eyes and respiratory tract.

Contains:

Additives that are encapsulated in the polymer. Under the normal conditions for processing and use of this polymer the encapsulated additives are not expected to pose any health hazard. However, grinding of the polymer is not recommended without the use of appropriate measures to control exposure (see Section 8 - Engineering Controls).

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.
Material -- Not expected to be harmful to terrestrial organisms.

MOBILITY

Material -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be persistent.

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Transformation due to atmospheric oxidation not expected to be significant.

BIOACCUMULATION POTENTIAL

Material -- Potential to bioaccumulate is low.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Suitable routes of disposal are supervised incineration, preferentially with energy recovery, or appropriate recycling methods in accordance with applicable regulations and material characteristics at the time of disposal.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Complies with the following national/regional chemical inventory requirements: TSCA

EPCRA SECTION 302: This material contains no extremely hazardous substances.

CWA / OPA: Plastic pellets are defined by the US EPA under the Clean Water Act (40CFR122.26) as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations. Pellets found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Revision Changes:
Section 16: Materials Covered information was modified.
THIS MSDS COVERS THE FOLLOWING MATERIALS: This MSDS covers ExxonMobil Propylene homopolymer, random copolymer and impact copolymer grades. Names of individual grades consist of the base polymer name or the base polymer name plus a suffix as an additional identifier. | Base polymers : | AP03 | AP3 | AP7885 | AXO3 | BNV002A | CL | CNW001A | EX777 | EXP 093 | Exxpol Enhance PP8114 | Exxpol Enhance PP8224 | Exxtral BNT010 | Exxtral BNT011 | Exxtral BNT013 | Exxtral BNT014 | Exxtral BNU011 | Exxtral BNU013 | Exxtral CNK010 | Exxtral CNN010 | Exxtral CNR011 | Exxtral CNR012 | Exxtral CNU011 | Exxtral CNU012 | Exxtral CNU013 | Exxtral CNU015 | Exxtral CNW010 | Exxtral CNW012 | Exxtral HNR011 | Exxtral HNW011 | Exxtral LNR010 | Exxtral LNT010 | Exxtral LNU011 | Exxtral LNU012 | Exxtral LNV010 | Exxtral RNU010 | Exxtral RNU011 | NP327 | PDI024 | PDI025 | PDI070 | PHD002 | PP1000 | PP1001 | PP1003 | PP1013 | PP1014 | PP1024 | PP1032 | PP1042 | PP1043 | PP1044 | PP1052 | PP1055 | PP1063 | PP1064 | PP1074 | PP1094 | PP1095 | PP1105 | PP1106 | PP1154 | PP1194 | PP1234 | PP1254 | PP1264 | PP1304 | PP1352 | PP1364 | PP1374 | PP1572 | PP1701DEV | PP1992 | PP1994 | PP1995 | PP2252 | PP2272 | PP2822E1 | PP2999 | PP3155 | PP3203 | PP3295 | PP3325 | PP3364 | PP3374 | PP3505 | PP3674 | PP3684 | PP3885 | PP4052 | PP4062 | PP4113 | PP4152 | PP4182 | PP4212 | PP4223 | PP4292 | PP4342 | PP4352 | PP4563 | PP4612 | PP4652 | PP4682 | PP4683 | PP4712 | PP4772 | PP4792 | PP4912 | PP5012 | PP5032 | PP5112 | PP5122 | PP5262 | PP5341 | PP5722 | PP6135 | PP6262 | PP6272N | PP7011 | PP7021 | PP7031 | PP7032 | PP7033 | PP7035 | PP7043 | PP7054 | PP7064 | PP7071 | PP7075 | PP7084 | PP7085 | PP7095 | PP7102 | PP7143 | PP7373 | PP7414 | PP7505 | PP7555 | PP7575 | PP7623 | PP7654 | PP7675 | PP7684 | PP7694 | PP7715 | PP7805 | PP7815 | PP7855 | PP7875 | PP7905 | PP7992 | PP7994 | PP7995 | PP8013 | PP8023 | PP8074 | PP8234 | PP8244 | PP8255 | PP9054 | PP9074 | PP9122 | PP9122E4 | PP9302 | PP9374 | PP9494 | PP9505 | PP9513 | PP9524 | PP9544 | PP9574 | PP9585 | PP9604 | PP9612 | PP9623 | PP9632 | PP9852 | PP9999 | PPCBSLMF | PPICO | PPICP | PPICP | PPICPG | PPK0132 | PPSPL | PPSPL111 | PPSPL514 | PPSPL627 | PPSPLG | PPSUBST US | PPT0012 | PPT0016 | PPT0152 | PPT0170 | PPU0009 | PPU0012 | PPU0016 | PPU0180 | PPV0004 | PPV0011 | PPV0016F | PPW0004 | PPW0010 | SFT315 | SFT325 | Suffixes : | AW | B | BE3 | C1 | C2 | C3 | C8 | E1 | E2 |

E3 | E4 | E5 | E6 | E7 | F | F1 | F2 | F3 | F4 | F5 | G | G1 | GE2 | H | H1 | H2 | HMF | HR | K | KE2 | KN | KNE1 | KNE2 | L1 | MD1 | MED | MMF | N | NE1 | O/S | SS

PRECAUTIONARY LABEL TEXT:

Caution! Excessive exposure to dust may cause irritation of the nose and throat, and mechanical irritation of the eyes. Avoid generating dust. Use adequate ventilation under dusty conditions to keep airborne levels below recommended exposure limits. If inhaled and symptoms develop, remove to fresh air and get medical attention.

Internal Use Only

MHC: 0, 0, 0, 0, 0, 0

DGN: 4408954PUS (1013487)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Pro-fax SR549M
CAS Number:		9010-79-1
Chemical characterization	:	1-Propene, polymer with ethene
Chemical Name	:	1-Propene, polymer with ethene
Synonyms	:	Polypropylene copolymer; PP copolymer; PP.
Company	:	Equistar Chemicals, LP LyondellBasell Tower, Suite 300 1221 McKinney St. P.O. Box 2583 Houston Texas 77252-2583
Telephone	:	Customer Service 888 777-0232 Product Safety 800 700-0946
Emergency telephone	:	CHEMTREC USA 800-424-9300 EQUISTAR 800-245-4532
E-mail address		product.safety@lyondellbasell.com

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

This material is NOT HAZARDOUS by OSHA Hazard Communication definition.

CAUTION.

Physical state	:	solid
Color	:	Translucent to white
Odor	:	Faint, mild hydrocarbon odor.
Hazard Summary	:	Dust may form explosive mixtures with air. At process temperatures irritating fumes may be produced. Molten polymer may cause thermal burns. Slipping hazard if spilled on hard smooth walking surface. The material can accumulate static charges which could be a source of ignition.

Potential Health Effects

Primary Routes of Entry : Eye.

Inhalation.
Skin.

Aggravated Medical Condition	:	No known conditions are aggravated by this material.
Inhalation	:	At process temperatures irritating fumes may be produced.
	:	Inhalation of process fumes and vapors may cause soreness in the nose and throat and coughing. "Nuisance dust" such as polymer dust typically exhibit no significant health effect when they are reasonably controlled. Exposure to high concentrations of dust may cause slight irritation by mechanical action.
Skin	:	Molten polymer may cause thermal burns.
Eyes	:	Mechanical irritation is possible.
Ingestion	:	Ingestion not a likely route of exposure.
Chronic Exposure	:	No known chronic health effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Component	CAS-No.	Weight %
1-Propene, Polymer with Ethene	9010-79-1	98.0 - 100.0 %
Additives		0.0 - 2.0 %

SECTION 4. FIRST AID MEASURES

First aid procedures

General advice	:	Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 2 of this MSDS.
If inhaled	:	Remove person to fresh air. If signs/symptoms continue, get medical attention.
In case of skin contact	:	If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissue and polymer. Do not attempt to peel polymer from skin. Obtain immediate emergency medical attention if burn is deep or extensive.

In case of eye contact	:	Flush eyes thoroughly with water for several minutes and seek medical attention if discomfort persists.
If swallowed	:	Adverse health effects due to ingestion are not anticipated.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

Autoignition temperature	:	> 572 °F (300 °C)
Lower explosion limit	:	Not applicable.
Upper explosion limit	:	Not applicable.

Fire fighting

Suitable extinguishing media	:	SMALL FIRE: Use dry chemical, CO2, water spray or regular foam LARGE FIRE: Use water spray, water fog or foam. DO NOT use straight streams
Unsuitable extinguishing media	:	High volume water jet
Further information	:	Not normally combustible, but will decompose under fire conditions. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Heat from fire may melt, decompose polymer, and generate flammable vapors. Move containers from fire area if you can do it without risk. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. Cool containers with flooding quantities of water until well after fire is out.

Protective equipment and precautions for firefighters

Specific hazards during fire fighting	:	Polyolefin dust particles in the atmosphere are combustible and may be explosive. Keep away from heat and sources of ignition.
Special protective equipment for fire-fighters	:	Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Equip responders with proper protection. Potential dust explosion hazard. Avoid generating dust.

Creates dangerous slipping hazard on any hard smooth surface.

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods for containment / Methods for cleaning up : On land, sweep/shovel into suitable disposal containers or vacuum using equipment which avoids ignition risk.
On water, material is insoluble; collect and contain as any solid.
All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

SECTION 7. HANDLING AND STORAGE

Handling

Advice on safe handling : Avoid accumulation of dust in enclosed space. Use in well-ventilated area.
Static discharge (spark) in high dust environments may be explosive.
Electrostatic charge may build up during handling. Equipment should be grounded and bonded.
Metal containers involved in the transfer of this material should be grounded and bonded.
All electrical equipment should be grounded and conform to applicable electric codes and regulatory requirements.
Material creates dangerous slipping hazard on hard surfaces.
After handling, always wash hands thoroughly with soap and water.

Storage

Requirements for storage areas and containers : Store in a dry location.
Use good housekeeping practices during storage, transfering and handling. Process enclosures and adequate ventilation should be used to avoid excessive dust accumulation.
Store away from excessive heat and away from strong oxidizing agents.
Keep container closed to prevent contamination.
Take measures to prevent the build up of electrostatic charge.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value	Control parameters	Update	Basis

Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	10 mg/m3	2005	US (ACGIH)
Further information		inhalable			
Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	3 mg/m3	2005	US (ACGIH)
Further information		respirable			
Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	15 mg/m3	2005	US (OSHA)
Further information		total dust			
Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	5 mg/m3	2005	US (OSHA)
Further information		respirable			

Engineering measures

Engineering measures : Ventilate area to prevent accumulation of dust and fumes.

Engineering controls, preferably enclosed systems, should be used whenever feasible to maintain exposures below acceptable criteria. When such controls are not feasible, or sufficient to achieve full conformance, other engineering controls such as local exhaust ventilation should be used.

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.
Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal protective equipment

Eye protection	:	Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles which may result from handling this product.
Hand protection	:	Wear heat protective gloves and clothing if there is a potential for contact with heated material.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use appropriate respiratory protection where atmosphere exceeds recommended limits.
Hygiene measures	:	Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Take off contaminated clothing and wash before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	:	solid
Color	:	Translucent to white
Odor	:	Faint, mild hydrocarbon odor.

Safety data

Lower explosion limit	:	Not applicable.

Upper explosion limit	:	Not applicable.
Flammability (solid, gas)	:	Not Classified. Polymer will burn but does not easily ignite.
Oxidizing properties	:	No Data Available.
Autoignition temperature	:	> 572 °F (300 °C)
pH	:	Not applicable.
Melting point/range	:	122 - 284 °F (50 - 140 °C)
Boiling point/boiling range	:	Not applicable.
Vapor pressure	:	Not applicable.
Density	:	< 1 g/cm3
Water solubility	:	Insoluble.
Partition coefficient: n-octanol/water	:	Specific data not available.
Viscosity, dynamic	:	Not applicable.
Relative vapor density	:	Not applicable.
Evaporation rate	:	Not applicable.
Explosive properties	:	No Data Available.
Remarks - Other information	:	No additional information available.

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	:	Avoid contact with strong oxidizers, excessive heat, sparks or open flame.
Materials to avoid	:	Material may be softened by some hydrocarbons.
Hazardous decomposition products	:	Not expected to decompose under normal conditions.
Thermal decomposition	:	Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed.
Hazardous reactions	:	Will not occur. The product is stable.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Mice given an acute oral dose of 8 g/kg of Polypropylene showed no noticeable toxic effects.

Acute inhalation toxicity : Inhalation of polypropylene dust may cause lung inflammation. Prolonged inhalation of thermal degradation products from polypropylene may cause neurological effects.

Acute dermal toxicity :

Not expected to be a skin absorption hazard.

Skin irritation : Not a skin irritant.

Eye irritation : Mechanical irritation is possible.

Sensitization : Not expected to be a sensitizer.

Target Organ Systemic Toxicant - Repeated exposure

: No adverse health effects were noted on the digestive system of test animals when fed up to 20% of an oligomeric polypropylene (molecular weight of 800) for two years.

Toxicology Assessment

CMR effects : **Carcinogenicity:**
Not listed by IARC, NTP, OSHA or EPA.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.

Additional advice Environmental fate and pathways : This material is not volatile and insoluble in water.

Biodegradability : Not expected to be biodegradable.

Further information on ecology

Additional ecological information : Ecotoxicity is expected to be minimal based on the low water solubility of polymers.

No data available on this product. However, birds, fish and other wildlife may eat pellets which may obstruct their intestinal tracts.

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible. Recycle if possible.

SECTION 14. TRANSPORT INFORMATION

Not regulated for transport

SECTION 15. REGULATORY INFORMATION

Notification status

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
European Union	ELINCS
Japan	ENCS/ISHL
Korea	ECL
Philippines	PICCS
United States of America	TSCA
New Zealand	NZIoC

Contact product.safety@lyondellbasell.com for additional global inventory information.
If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

This material is not known to contain a chemical substance known to the State of California to cause cancer, reproductive, or developmental toxicity under California Proposition 65. However, LyondellBasell has not tested for the presence of listed chemical substances.

This product contains no known chemicals regulated by New Jersey's Worker and Community Right to Know Act.

No components are subject to the Massachusetts Right to Know Act.

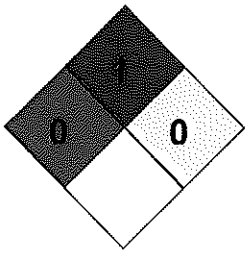
This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

SECTION 16. OTHER INFORMATION

Further information

HMIS Classification : Health Hazard: 0
Flammability: 1
Reactivity: 0

NFPA Classification : Health Hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0



Material safety datasheet sections which have been updated:
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