

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Moplen RP348N

PRODUCT DESCRIPTION : Propylene – Ethylene Copolymer Pellets

MANUFACTURER

HMC Polymers Company Limited
Sathorn City Tower, 20th Floor
175 South Sathon
Bangkok 10120, Thailand
Tel: 66-2-6143700

24 HR. EMERGENCY TELEPHONE NUMBER

Emergency Phone: 66-38-683861 ext. 1257

HMC Polymers Company Limited
Petrochemical Complex, P.O. Box 2
Maptaphut Industrial Estate
Muang, Rayong 21150, Thailand
Tel: 66-38-683861

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS #</u>
Propylene – Ethylene Copolymer	>95	9010-79-1
Stabilizers (trade secret)	<5	

COMMENTS : This product is not considered a hazardous material at temperatures below the melting point as determined by HMC Polymers according to the U.S. Occupational Safety and Health Act definitions and regulation, including the Hazard Communication Standard 29 CFR 1910.1200. This product is not considered a controlled substance by HMC Polymers according to Canada's WHMIS regulations. Threshold Limit Values (TLV) or Permissible Exposure Limit (PEL) values are not established. This material is not expected to cause physiologic impairment at low concentration. Until a specific TLV is adopted by ACGIH (American Conference of Governmental Hygienists), or an OSHA (Occupational Safety and Health Administration) PEL standard is issued, HMC Polymers suggests that this material be treated as a nuisance dust or particulate in accordance with the recommendations of ACGIH.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE : Translucent to white solid pellets

IMMEDIATE CONCERNS : Spilled material may present a slipping hazard. This product as shipped is not classified as a combustible dust; however, a combustible concentration of dust may occur if fines are suspended in air. Avoid contact with strong oxidizing agents. When working with the material at temperatures above the melting point, the material will begin to decompose producing fumes that can contain carbon dioxide, carbon monoxide, ketones, acrolein, aldehydes and other unidentified organic compounds that come from the breakdown of the material. Adequate room and extruder ventilation should be provided to minimize exposures.

POTENTIAL HEALTH EFFECTS

EYES: Process vapors may irritate eyes.

SKIN: Exposure to molten resin may cause thermal burns.

INGESTION: Not Applicable.

INHALATION: Process vapors may cause respiratory tract irritation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Irritation or redness.

SKIN: Not Applicable.

INGESTION: Not Applicable.

INHALATION: Irritation of the nose, throat and respiratory tract.

ACUTE TOXICITY : Process vapors may cause eye and respiratory tract irritation.

CHRONIC : None Known.

CARCINOGENICITY : None Known.

MUTAGENICITY : None Known

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: None Known.

TERATOGENIC EFFECTS: None Known.

MEDICAL CONDITIONS AGGRAVATED: None Known.

ROUTES OF ENTRY: Eye, Inhalation

TARGET ORGAN STATEMENT: None Known.

CANCER STATEMENT: This product is not considered to be a carcinogen by OSHA, IRAC or NTP.

IRRITANCY: Exposure to process vapors may cause eye and respiratory tract irritation.

SENSITIZATION: None Known.

WARNING CAUTION LABELS: Burn Risk – Avoid contact with molten resin. Explosion Risk – Prevent accumulation of dust particles. Slipping Risk – Keep walking surfaces free of spilled material. Vapor Risk – Provide ventilation to avoid exposure to process vapors.

COMMENTS HEALTH: None.

HEALTH HAZARDS: Process vapors may cause eye and respiratory tract irritation.

PHYSICAL HAZARDS: Spilled material may present a slipping hazard. Exposure to molten resin may cause thermal burns.

4. FIRST AID MEASURES

EYES: Flush eyes with water for 15 minutes. Get medical attention.

SKIN: Molten resin – If molten material comes in contact with the skin, cool under ice water or a running stream of water. DO NOT attempt to remove the material from the skin. Removal could result in severe damage. Get medical attention.

INGESTION: Not Applicable.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

ANTIDOTES: Not Applicable.

NOTES TO PHYSICIAN: None.

ADDITIONAL INFORMATION: None.

5. FIRE FIGHTING MEASURES

AUTOIGNITION TEMPERATURE: Not Determined.

EXTINGUISHING MEDIA: Use foam, carbon dioxide, or water spray when fighting fires involving this material.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide, ketones, acrolein, aldehydes, unidentified organic compounds.

EXPLOSION HAZARDS: Product as shipped is not a combustible dust. However, a combustible concentration of dust may occur when fines are suspended in air.

FIRE FIGHTING PROCEDURES: Standard procedure for Class A fires.

FIRE FIGHTING EQUIPMENT: As in any fire, water self-contained pressure demand breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

SENSITIVE TO STATIC DISCHARGE: Static discharge could be an ignition source for a combustible concentration of dust.

SENSITIVITY TO IMPACT: Not Applicable.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Sweep up material and place in a disposal container.

LARGE SPILL: Vacuum or sweep up material and place in a disposal container.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Keep pellets out from waterways.

LAND SPILL: Not Yet Determined.

GENERAL PROCEDURES: Vacuum or sweep up material and place in a disposal container.

SPECIAL PROTECTIVE EQUIPMENT: None.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep away from heat, sparks and flame.

HANDLING: Ground and bond containers when transferring material.

STORAGE: This product may react with strong oxidizing agents and should not be stored near such materials. Store boxed and bags of material in areas protected with automatic sprinklers.

COMMENTS : Precautions on Stacking Palletised Bags

- Only double-stack materials when the pallet is clearly stable, squared, and safe to be stacked.
- If the HMC Polymers delivery paperwork indicates that material may only be single stacked, or if the delivered pallets of material carry a pictogram indicating single stacking, then on no account should these materials be double stacked.
- Ensure that staff is skilled, and fully trained in safe handling of HMC Polymers' products.
- Only double-stack material in a cool, dry, warehouse environment.
- Keep walkways clear, and never stack product adjacent to walkways, including the front of a stack,
- Make regular visual inspections of the warehouse. Damaged or leaning stacks should immediately be de-stacked. Damaged bags should immediately be removed from the pallet.
- Product may be stacked in proprietary racking systems, which the racking vendor has confirmed as fit for purpose, incorporating proper support for the pallet, and designed for at least 1.5 tonnes gross pallet weight. Pallets stored in racking systems should be evenly distributed.
- The external overwrap film is part of the overall pallet integrity and once removed special care must be taken and pallets must only be single stacked.
- Never attempt to stack pallets stored outside.
- Never attempt to stack pallets on a sloping floor.
- Stacks can fall over within a few minutes when bottom bag(s) is(are) leaking. Before repairing the leaking bag(s), the top bag/pallet (if any) must be removed.
- It is not recommended to palletise or double-stack Jumbo-Bags.
- If in any doubt- Do not stack.
- Jumbo bags are designed for single trip use only, and should not be re-used.

STORAGE TEMPERATURE: 60°C (140°F) maximum.

STORAGE TEMPERATURE NOTES: Stored in a cool place below 60°C, 140°F.

ELECTROSTATIC ACCUMULATION HAZARD: Material may accumulate static charges during transfers. Ground and bond containers when transferring material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS : Provide adequate room ventilation. Provide adequate ventilation at the extruder to minimize exposure to process vapors. Eliminate ignition sources during repair and maintenance operations.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields (or goggles).

SKIN: When handling or processing resins at elevated temperatures or in a molten state, wear protective clothing over the skin to prevent contact.

RESPIRATORY: A respiratory protection program that meets OSHA 1910.134, ANSI Z88.2 and/or CSA Z94.4-93 requirements must be followed whenever workplace conditions warrant use of a respirator.

PROTECTIVE CLOTHING: When handling or processing resins at elevated temperatures or in a molten state, wear protective clothing over the skin to prevent contact.

OTHER USE PRECAUTIONS: Eyewash fountains and safety showers should be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE : Solid

ODOR : Slightly waxy odor

APPEARANCE: Pellet

COLOR: Translucent to white

MELTING POINT: >120°C (248°F)

SPECIFIC GRAVITY: 0.88 TO 0.92

COMMENTS:

PERCENT VOLATILE: <0.4%

WATER SOLUBILITY: Negligible

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID: Keep away from heat, sparks and flame.

POLYMERIZATION: Product will not undergo polymerization.

HAZARDOUS DECOMPOSITION PRODUCTS: At elevated temperature the material will begin to decompose, producing fumes that can contain carbon dioxide, carbon monoxide, ketones, acrolein, aldehydes, unidentified organic compounds.

INCOMPATIBLE MATERIALS: Oxidizing materials.

11. TOXICOLOGICAL INFORMATION

GENERAL COMMENTS: None Known

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Not Available

ECOTOXICOLOGICAL INFORMATION: Not Available

DISTRIBUTION: Not Available

CHEMICAL FATE INFORMATION: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: (1) Recycle (reprocess). (2) Incineration including energy recovery of waste material in a permitted facility in accordance with local, state or provincial and federal regulations. (3) Landfilling in a licensed facility in accordance with local, state or provincial and federal regulations.

RCRA HAZARD CLASS: This product is not judged to be a hazardous waste by any local, state or federal regulations; however, it may be listed as industrial waste in some states or provinces.

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

14. TRANSPORT INFORMATION

SPECIAL SHIPPING NOTES: This product is not regulated by DOT, IMO, IATA, Canadian TDG and associated regulations, ADR or RID.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

TITLE III NOTES: This product is not subject to SARA Title III requirements.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All ingredients in this product are in compliance with TSCA.

OSHA HAZARD COMM. RULE: This product is not considered a hazardous material at the temperatures below the melting point as determined by HMC Polymers according to OSHA definitions.

CLEAN WATER ACT: This product is not regulated under EPA's Clean Water Act/NPDES rules as "floating material". In addition, this product is considered "significant material" under the EPA's storm water permit rules.

CANADA

WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM): This product is not considered a controlled substance under WHMIS. This MSDS meets WHMIS format requirements.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All ingredients in this product are listed under CEPA on the DSL.

EUROPEAN COMMUNITY

EUROPEAN COMMUNITY REGULATORY: All ingredients are in compliance with EINECS/ELINCS.

16. OTHER INFORMATION

APPROVED BY : Dr. Andreas Goedel

Title : Business Innovation Manager

REVISION SUMMARY

1. Company telephone no.
2. Name and title of approver.

MANUFACTURER DISCLAIMER:

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