Safety Data Sheet (SDS)

Revision / Review Date: 6/1/15

1. Chemical Product and Company Identification

Product Name:	NORDEL IP 4770P
Distributed By:	HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023
SDS Prepared By (w Suppliers Input):	HB Chemical
Chemical Name / Family:	Not available
Technical Name:	Hydrocarbon Rubber
Molecular Formula:	Not available
Molecular Weight via GPC, Mn:	Not available
Product Use:	Synthetic Polymers
OSHA Status:	Non Hazardous
CAS No:	16219-75-3, 25038-36-2, 9002-88-4

For emergency health, safety, and environmental information, calls 330-920-8023
For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

Hazards of product:	CAUTION! May form explosive dust-air mixture. Slipping hazard.
OSHA Hazard Communication Standard:	This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Skin Absorption:	No adverse effects anticipated by skin absorption.
Aspiration hazard:	Based on physical properties, not likely to be an aspiration hazard.
Warning:	Not available.
Signs and Symptoms of Exposure:	Not available.
Primary Routes of Entry:	Not available.
Medical Conditions Generally Aggravated by Exposure:	None Known.
Eye Contact:	Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

Skin Contact:	Prolonged contact is essentially nonirritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.
Ingestion:	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.
Inhalation:	Dust may cause irritation to upper respiratory tract (nose and throat). Vapors released during thermal processing may cause respiratory irritation.
HMIS Hazard Ratings:	Not available.
HMIS limitation statement:	The HMIS hazard ratings numbers are meant to give a quick indication of the relative hazards associated with the product. All of the information contained in the SDS should be consulted to assist with the safe handling of this material.

Principal Hazardous Components:

5-Ethylidenebicyclo [2.2.1]hept-2-ene	ACGIH	Ceiling	5 ppm

3. Composition / Information on Ingredients

Component	CAS #	Amount
Ethylene-propylene-ethylidenenorbornene terpolymer	25038-36-2	> 97.0 %
Ethene, homopolymer	9002-88-4	< 2.0 %
5-Ethylidenebicyclo [2.2.1]hept-2-ene	16219-75-3	<= 0.016 %

4. First Aid Measures

General advice:	First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation:	Move person to fresh air; if effects occur, consult a physician.
Eyes:	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Skin:	Wash skin with plenty of water. Seek first aid or medical attention as needed. If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek

	medical attention immediately. Suitable emergency safety shower facility should be immediately available.
Ingestion:	If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.
Most important symptoms and effects, both acute and delayed:	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.
Indication of immediate medical attention and special treatment needed:	If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire-Fighting Measures

Suitable Extinguishing Media:	Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.
Fire Fighting Procedures:	Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.
Special Protective Equipment for Firefighters:	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
Hazardous Combustion Products:	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
Unusual fire and explosion hazards:	Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard. Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur. Dense smoke is produced when product burns.

6. Accidental Release Measures

Steps to be taken in case material is spilled:	Spilled material may cause a slipping hazard. Use appropriate safety equipment. Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers.
Environmental Disposal Information:	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
Waste Disposal:	Reclaim or dispose of in accordance with local, state, and federal regulations.

7. Handling and Storage:

Empty Containers:	Not available.
Precautions to be taken in handling:	Keep away from heat, sparks and flame. Use with adequate ventilation. No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.
Storage:	Store in accordance with good manufacturing practices.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
5-Ethylidenebicyclo [2.2.1]hept-2-ene	ACGIH	Ceiling	5 ppm

Respiratory Protection:

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present. The following should be effective types of air-purifying respirators: When dust/mist are present use a/an

	Particulate filter. When combinations of vapors, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter.
Ventilation:	Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.
Hand Protection:	Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection, when needed.
Eye Protection:	Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator.
Skin and Body Protection:	No precautions other than clean body-covering clothing should be needed.
Other Precautions:	Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.
Decontamination Facilities:	Eye bath, washing facilities (sinks / showers).

9. Physical and Chemical Properties

Physical Form:	Solid - Pellets
Appearance & Odor:	Translucent / Odorless
Specific Gravity:	0.84 - 0.9
Softening Point, R&B:	Not available.
Solubility in Water:	Negligible.
Flash Point, TAG CC F:	> 240 °C (> 464 °F)
Percent Volatiles (by weight):	Not available.
Evaporation Rate (Water ~ I):	Not available.
Vapor Pressure (mm Hg):	Not available.
Vapor Density (Air ~ I):	Not available.
Boiling Point (°F) Initial:	Not available.

Auto ignition Temperature, °C:	Not available.
Flammable Limits, %(V):	Not available.

10. Stability and Reactivity

Stability:	This product is stable under normal conditions.
Reactivity:	No dangerous reaction known under conditions of normal use.
Incompatibility (Materials to Avoid):	None known.
Conditions to Avoid:	Avoid temperatures above 240°C (464°F) Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.

11. Toxicological Information

This material is not listed as a carcinogen or potential carcinogen by NTP, IARC, or OSHA.

OSHA Permissible Exposure Limit:	Not available.
ACGIH Threshold Limit Value:	Not available.

Acute Toxicity:

Ingestion:	Single dose oral LD50 has not been determined. Typical for this family of materials. Estimated. LD50, rat > 5,000 mg/kg
Dermal:	The dermal LD50 has not been determined. Typical for this family of materials. Estimated. LD50, rabbit > 2,000 mg/kg
Inhalation:	The LC50 has not been determined.
Eye damage/eye irritation:	Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.
Skin corrosion/irritation:	Prolonged contact is essentially nonirritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Skin:	No relevant data found.
Respiratory:	No relevant data found.
Repeated Dose Toxicity:	As product: No relevant data found.
Chronic Toxicity and Carcinogenicity:	As product: No relevant data found.
Developmental Toxicity:	As product: No relevant data found.
Reproductive Toxicity:	As product: No relevant data found.
Genetic Toxicology:	As product: No relevant data found.

12. Ecological Information

Toxicity:	Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.
Persistence and Degradability:	This water-insoluble polymeric solid is expected to be inert in the environment. Surface photo degradation is expected with exposure to sunlight. No appreciable biodegradation is expected.
Bioaccumulation:	No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).
Mobility in soil:	In the terrestrial environment, material is expected to remain in the soil., In the aquatic environment, material is expected to float.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. Landfill. If incineration is used, take precautions to guard against the formation of explosive dust air mixtures when handling combustible powders.

14. Transport Information

D.O.T. Shipping Name:	Not regulated in bulk and Non-bulk.
Air - ICAO (international Civil Aviation Organization):	Not regulated.
Sea - IMDG (International Maritime Dangerous Goods):	Not regulated.

15. Regulatory Information

OSHA Hazard Communication Standard:	This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312:	Immediate (Acute) Health Hazard No Delayed (Chronic) Health Hazard No Fire Hazard No Reactive Hazard No Sudden Release of Pressure Hazard No.
Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313:	To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
Pennsylvania (Worker and Community RTK Act) Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:	To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
Pennsylvania (Worker and Community RTK Act): Pennsylvania Special Hazardous Substances List:	To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):	This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.
US. Toxic Substances Control Act:	All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30
CEPA - Domestic Substances List (DSL):	All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.

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