



THE GARLAND COMPANY, INC.

Material Safety Data Sheet (MSDS)

MSDS Status: Current
Product Name: Tuff-Coat Aggregate
Product Code: 1643-Agg

Product Status: Active
Revision Date: 2010-07-07
Version: 2010.1

SECTION I - CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Chemical Name: Polypropylene Homopolymer
CAS No.: 9003-07-0
Product Description: Tuff-Coat Aggregate
Colors: White solid

Hazard Classification: HEALTH - 1 FLAMMABILITY - 1 REACTIVITY - 0 **PERSONAL PROTECTION - E**

Manufacturer/Supplier: THE GARLAND COMPANY, INC. GARLAND CANADA, INC.
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SECTION II - HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

These products are micronized powders. Static charges on the powders may ignite flammable atmospheres. High levels of product dust in the atmosphere may present a dust explosion hazard.

No significant health hazard expected from exposure to products.

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: The risk of exposure to hazardous concentrations of vapor under normal working conditions in a well ventilated space is minimal. However, conditions such as spraying, or sudden release of hot liquid, which generate an aerosol, mists or fog should be avoided. Inhalation of aerosol, mist or fog may cause harm if inhaled. Inhalation of dust may cause respiratory irritation.

EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Particulates may cause mechanical eye irritation. Flush eyes with copious amounts of water for at least 15 minutes.

SKIN CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Mild dermal irritant. Exposure may lead to itching, scaling, drying and irritation of skin.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Generally non-toxic unless large quantities are ingested.

HEALTH HAZARDS (ACUTE & CHRONIC)

Acute effects: Not Determined

Chronic Effects: No delayed, subchronic or chronic test data are known.

N.T.P. CARCINOGEN: No **I.A.R.C. CARCINOGEN:** No **OHSA REGULATED:** No

MEDICAL CONDITONS GENERALLY AGGRAVATED BY EXPOSURE: May irritate people with skin problems, asthma, and lung diseases. Susceptible individuals may have an allergic reaction.

SECTION III – COMPOSITION / INFORMATION

Components:

CHEMICAL NAME	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS
		OHS PEL
Polypropylene homopolymer	9003-07-0	5mg/m ³ (dust)

AVOID HIGH CONCENTRATIONS OF POLYMER FUMES WHEN MELTING

Trace impurities and additional material names not listed above may also appear in Regulatory Information section (#15) towards the end of the MSDS. These materials may be listed for local “Right to Know” compliance and for other reasons.

SECTION IV - FIRST AID PROCEDURES

EYE CONTACT: Flush with copious amounts of water for at least 15 minutes. If irritation persists, consult a physician.

SKIN CONTACT: If burned by hot wax, quench immediately with cold tap water. Dry burn area and loosely cover to protect against infection. Do not apply ointment or salves. For skin irritation, was skin with soap and water and use emollient skin cream.

INGESTION: Induce vomiting if large quantities are ingested. Do not give anything to an unconscious person.

INHALATION: Treat as a nuisance dust. Remove victim to fresh air and provide oxygen if breathing is difficult.

INSTRUCTION FOR PHYSICIANS: No specific advice. Treat according to symptoms present.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: >530°F (277°C) **METHOD USED:** ASTM D 92 COC

AUTO IGNITION: Not determined.

FLAMMABLE LIMITS BY VOLUME % IN AIR

LEL (LOWER EXPLOSION LIMIT): Not Determined

UEL (UPPER EXPLOSION LIMIT): Not Determined

OHS FLAMMABILITY CLASS: Combustible solid

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical or fine water spray. Avoid water stream on molten burning material as it may scatter and spread the fire.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing approved by NIOSH. Watch footing on floors and stairs because of possible melting and spreading of material. Use spray to keep containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT: >530°F (277°C). Melts in proximity to fires causing slippery floors and stairs. When powder is suspended in air, these products could be FLAMMABLE/EXPLOSIVE. In these circumstances, keep away from heat, sparks and open flames. Static charges on powders or powders in liquids may ignite flammable atmospheres. See Section 7 “Handling and Storage” for suggestions on how to use these products under such conditions. Also, refer to NFPA Bulletin 654, “Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries”, for safe handling procedures.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear recommended personal protective

equipment. Remove ignition sources. Sweep up with minimum of dusting. Keep away from heat or flame. Collect in containers (e.g. fiberboard drums or cartons) If hot liquid, attempt to confine spill and let the polymer solidify. Once solid, it may be recovered as the powder. Report major leaks and spills to the appropriate local, state and federal government agencies.

See the Regulatory Information section (#15) regarding reporting requirements.

SECTION VII - SAFE HANDLING AND STORAGE

SPECIAL HANDLING AND STORAGE:

NORMAL HANDLING: (Always wear recommended personal protective equipment.) Avoid breathing fumes from heating operations. Avoid spillage which can cause very slippery conditions on floors. Use good personal hygiene and housekeeping.

STATIC ELECTRICITY AND FINE PARTICLE SIZE WAXES

Electrostatic charges of non-conductive materials is a natural phenomenon ranging from harmless to a nuisance to a hazard, depending on the degree of charging and the environment where the discharge takes place. In the case of micronized polymers and waxes, very high levels of static electricity develop in the r manufacture, transportation and handling. These products, being poor conductors of electricity, can and will hold a static charge for long periods of time. With this in mind, a great deal of care should be exercised when handling this type of product on or around flammable liquids, particularly if the liquid is at or near its flashpoint. The generation of static electricity, cannot be prevented because its intrinsic origins are present at every particle interface. Some common sense approaches toe the hazards involved with static electricity are as follows:

- Use only conductive equipment and keep all components grounded and bonded to the same vessel in order to equalize any potential charge.
- Avoid projections and probes that could lead to discharge between the charged polymer and a probe.
- Avoid a flammable condition by the use of inert gases in the container or by providing sufficient exhaust so as to prevent a buildup of flammable solvent vapors.
- Never pour micronized polymers or waxes from a drum or large container directly into hot flammable solvents.
- Add micronized polymers or waxes slowly and in small quantities to hot flammable solvents.
- Do not permit the product to free fall directly into the solvent. Use a pipe or chute that leads down to the level of the solvent. Make sure the pipe or chute is grounded and/or bonded is preferred.
- If mechanical equipment must be used, a slow-turning screw feeder that is grounded and/or bonded is preferred.
- Good housekeeping is of prime importance. The building and equipment should be designed to eliminate shelves and ledges and similar places where materials can accumulate.

The above are only suggestions and should not be taken as recommended practices in your establishment. A more detailed discussion and recommended practices can be found in NFPA 77 issued by the national Fire Protection Association, Inc. in 1988.

STORAGE RECOMMENDATINOS: Avoid excessive heat. Do not store near strong oxidizing agents and amines.

SECTION VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation during heating processes or if dusty conditions prevail when handling powdered materials. For storage and ordinary handling, general ventilation is adequate.

RESPIRATORY PROTECTION: Use a NIOSH approved dust respirator with a powdered was. During melting or conveying in molten state, use organic vapor respirator.

VENTILATION: Face velocity greater than 60 cfm (adequate to capture wax dust or fumes).

SKIN PROTECTION: Use heat resistant, impervious gloves to avid repeated/prolonged skin contact with molten material and powder. Other protective garments as necessary.

EYE PROTECTION: Chemical goggles around molten material and in dusty conditions.

OTHER PROTECTIVE EQUIPMENT OR CLOTHING: As needed to prevent repeated/prolonged contact

WORK / HYGIENIC PRACTICES: Wash skin thoroughly with soap and warm water after handling and before smoking, eating or applying makeup. If clothes become contaminated, change to clean clothing. Do not wear contaminated clothing until properly laundered.

EXPOSURE GUIDELINES: Powdered forms may generate nuisance particulates upon handling;
ACGIH TLV = 10 **OHSA PEL = 5mg/m³**

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE: White
PHYSICAL STATE: Solid
ODOR: Typical wax odor.
VAPOR PRESSURE: NIL
VAPOR DENSITY: Heavier than air
BOILING POINT: Not Applicable
MELTING POINT: 330°F (166°C)
FLASH POINT: >530°F (277°C)
DENSITY: 0.90 g/cc
pH: Not Applicable
VISCOSITY: Not Applicable
% VOLATILES: Zero

SECTION X - STABILITY AND REACTIVITY DATA

STABILITY: Stable at normal conditions.

CONDITIONS TO AVOID: Extreme heat, sparks, and open flames.

INCOMPATIBILITY (AVOID CONTACT WITH): Strong oxidizing agents and amines.

HAZARDOUS DECOMPOSITION PRODUCTS AND/OR BY PRODUCTS: Fumes, smoke, carbon dioxide, carbon monoxide and combustible gases may be generated.

HAZARDOUS POLYMERIZATION: Should not occur.

SECTION XI - TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS: No data developed

DELAYED (SUBCHRONIC & CHRONIC) EFFECTS: No data developed

OTHER DATA: No data developed

SECTION XII - ECOLOGICAL INFORMATION

ECOLOGICAL PROFILE: No data have been developed on this subject. These polymeric products are not soluble in water. They are not considered biodegradable.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Assume conformity with applicable disposal regulations. Dispose of absorbed material at approved incineration or chemical landfill waste disposal site.

RCRA: Is the unused product a RCRA hazardous waste if discarded? No

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

SECTION XIV - TRANSPORTATION INFORMATION

Printing Ink Components Class 55.

DOT Regulated: Non-Hazardous

SECTION XV - REGULATORY INFORMATION

REACH: Registration and compliance pending. As a supplier, we are aware of the REACH legislation and our supplier is actively pursuing registration of the raw materials purchased and used in our products as "Downstream Users." Action items that took effect on June 1, 2007 include the entry into force of REACH. The REACH articles that went into force on this date are Article 32, Article 67 and Article 115. This product or its components comply with these articles.

TSCA: This product or its components are listed on the TSCA Inventory. This product or its components do not contain any chemicals subject to any rules or orders under TSCA sections 4,5,6,7, or 8(d).

CONFORMS TO THE FOLLOWING FDA SECTIONS: 21 CFR 177.1520

CALIFORNIA PROP 65 INFORMATION: Not Regulated

STATE RIGHT TO KNOW INFORMATION:

NJRTK or CAS#: 9003-07-0

Polypropylene homopolymer CAS#: 9003-07-0

WHMIS: Not subject to WHMIS regulations

INTERNATIONAL INVENTORY STATUS: This product or its components appear on the following international inventories:

EINECS (monomers): AICS, NICNAS, TCCL, ECL, MITI, PICCS, IECSC TSCA, DSL

SARA TITLE III: This product is subject to SARA title III reporting?

Section 311/312 – Immediate/ Acute Health (irritant): YES

Section 302 – Contains an extremely hazardous substance: NO

Section 313 – This product does not contain any toxic chemical listed under Sec. 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

CLEAN WATER ACT – Priority Pollutants: contains no known priority pollutants at concentrations greater than 0.1%

HEAVY METALS ANALYSIS (Typical) in PPM:

Pb Cd Ba Ag Sb Hg Cr As Se Al Cu Ni Zn

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

SECTION XVI - ADDITIONAL INFORMATION

QUALITY ASSURANCE PROGRAM CERTIFIED TO ISO 9001:2008

The information contained in this Material Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard communication Standard 29 CFR 1910.1200. This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness, whether originating within the company or not. The user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with applicable federal, state or local hazard communications requirements. We assume no liability in connection with the use of this product. It is intended for use by persons having technical skill and knowledge, at their own discretion and risk.

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