

SECTION 1: IDENTIFICATION**Product identifier**

Trade name: **IntelliPack SmartFOAM™ A**
Synonym(s): IntelliPack foam-in-place packaging component A
Preparation/Revision date: 8 March 2018

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Protective packaging – Foam component A
Uses advised against: None known

Details of the supplier of the safety data sheetManufacturer / Supplier

Company name: Pregis Innovative Packaging, Inc.
Address: 1650 Lake Cook Road, Suite 400
Deerfield, IL 60015
Customer service: 877-692-6163

Emergency telephone number

For product and additional safety information:

George T. Allen
Director of Material Sciences and Technical Services
Telephone: (559) 651-0951 x 101
e-mail: gallen@pregis.com

24-Hour Emergency Contact:
Chemtrec: (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION**Classification of the substance or mixture**

Classification according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification: Acute Tox (Inhalation - mist) – Category 4
Eye Damage/ Irritation – Category 2B
Skin Corrosion/Irritation – Category 2
Skin Sensitization - Category 1B
Respiratory Sensitization - Category 1
STOT Single Exposure - Category 3
STOT Repeated Exposure - Category 2

SECTION 2: HAZARDS IDENTIFICATION (CONT'D)
Label elements


Hazard pictogram:

Signal word:

Hazard statement:

Danger

Harmful if inhaled.

Causes eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

 May cause allergy or asthma symptoms or breathing difficulties if
Inhaled.

May cause respiratory irritation.

 May cause damage to organs (olfactory organs) through prolonged or
repeated exposure (inhalation).

Precautionary statements:

- Prevention:

Do not breathe dust/gas/mist/vapors.

In case of inadequate ventilation: wear respiratory protection.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing.

Wash hands thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

- Response:

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center or doctor/physician if you feel unwell.

If experiencing respiratory symptoms: Call a poison center or doctor/physician.

 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,
if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

- Storage:

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

- Disposal:

Dispose of in accordance with local/regional/national/international regulations.

Supplemental label information:

None

Hazards Not Otherwise Classified

None known

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | Percent * | CAS No. | Notes |
|---|------------------|----------------|--------------|
| P-MDI | ≥ 50 - <75 | 9016-87-9 | |
| Diphenylmethane-4,4'-diisocyanate (MDI) | ≥ 25 - <50 | 101-68-8 | # |

* The exact percentage (concentration) of composition has been withheld as a trade secret.

- Substance has Occupational Exposure Limits; see Section 8.

SECTION 4: FIRST AID MEASURES
General Information

Show this Safety Data Sheet to the medical professional in attendance. If symptoms occur, follow first aid measures as appropriate.

Description of first aid measures

Inhalation:

Move victim to fresh air, if symptoms persist, obtain medical attention.

Skin contact:

Remove contaminated clothing. Wash thoroughly with soap and water. Wash contaminated clothing before reuse. If irritation develops or persists, get medical attention.

Eye contact:

Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops, get medical attention.

Ingestion:

Rinse mouth and then drink plenty of water. Never give anything by mouth to an unconscious or convulsing person. DO NOT induce vomiting. Get medical attention.

Notes to Physician:

Treat symptomatically.

Most important symptoms and effects, both acute and delayed

May causes eye, skin and respiratory irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (olfactory organs) through prolonged or repeated exposure (inhalation).

Indication of any immediate medical attention and special treatment needed

None known.

SECTION 5: FIRE FIGHTING MEASURES**General fire hazards**

Closed container may forcibly rupture under extreme heat. Use cold water spray to cool fire exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied at a safe distance.

Extinguishing Media

Suitable extinguishing media:

Water, Foam, Dry Chemical, Carbon Dioxide. Use extinguishing media appropriate for surrounding material.

Unsuitable extinguishing media:

None known.

Special hazards arising from the substance or mixture

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 but are not limited to: nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, carbon dioxide, and water.

Advice for firefighters

Special protective equipment for firefighters:

Firefighters should use self-contained breathing apparatus and wear full protective equipment. Personnel / bystanders should be kept upwind of fire.

Special firefighting procedures:

None

Special remarks on fire hazards:

None

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as recommended in Section 8. Keep unprotected persons away. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wash thoroughly after handling.

Methods and materials for containing and cleaning up

Contain the spill to prevent spread into drains, sewers, water supplies to soil. Cover spill area with suitable absorbent material. Saturate absorbent material with neutralization solution and mix. Wait 15 minutes. Collect material in open-head metal containers. Repeat applications of neutralization solution, with scrubbing, followed by absorbent until the surface is decontaminated. Neutralization solutions: (1) Colorimetric Laboratories, Inc. (CLI) decontamination solution (2) A mixture of 75% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10) and 5% n-propanol (3) A mixture of 80% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10) (4) A mixture of 90% to 95% water, 3%-8% ammonium hydroxide or concentrated ammonia and 2% liquid detergent.

SECTION 7: HANDLING AND STORAGE
Precautions for safe handling

Use personal protective equipment as recommended in Section 8. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors/mists. Avoid aerosol formation. When handling heated product, vapors of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store between 32°F and 110°F. Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Do not reseal containers unless it is certain that no moisture contamination has occurred. Do not store in direct sunlight for prolonged periods of time.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION
United States. Occupational Exposure Limits:

| Component | CAS No. | Type | Value | Form |
|---|-----------|---------------|------------------------|------|
| P-MDI | 9016-87-9 | N/A | N/A | N/A |
| Diphenylmethane-4,4'-diisocyanate (MDI) | 101-68-8 | ACGIH-TWA | 0.005 ppm | N/A |
| | | NIOSH-TWA | 0.005 ppm | N/A |
| | | | 0.05 mg/m ³ | |
| | | NIOSH-IDLH | 75 mg/m ³ | N/A |
| | | NIOSH-Ceiling | 0.020 ppm | N/A |
| | | | 0.02 mg/m ³ | |
| | | OSHA-PEL | 0.020 ppm | N/A |
| | | | 0.02 mg/m ³ | |

Appropriate engineering controls

Observe occupational exposure limits. Local exhaust should be used to maintain levels below the exposure limits. Eye wash station should be located in immediate work area.

Individual Protective Measures
General Information:

Avoid skin and eye contact. Avoid inhalation of vapors and mists. Personal protective equipment should be chosen according to applicable standards and in consultation with the supplier of the personal protective equipment. 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. Medical supervision of employees who come into contact with respiratory sensitizers is recommended. Persons with asthmatic-type conditions, chronic bronchitis, other

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT'D)

chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted.

Eye/face protection:

Wear safety glasses. Chemical resistant goggles recommended. Wear face shield if splashing hazard exists.

Skin protection:

Wear protective gloves. Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate chemical resistant clothing to prevent skin contact.

Respiratory protection:

When potential exists to exceed exposure limit, an approved air purifying respirator equipped with an organic vapor cartridge and a HEPA particulate filter may be used when an appropriate cartridge change-out schedule has been developed in accordance with the OSHA respiratory protection standard. For most conditions, no respiratory protection should be needed. Due to the low vapor pressure of this material, the PEL is not likely to be exceeded under normal conditions; however if material is heated, sprayed, or causes irritation, use aforementioned respirator.

Thermal hazards:

None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties

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|---|---------------------|--|------------------------|
| Appearance- Physical state | Liquid | Explosive properties | No data available |
| Appearance- Color | Dark amber | Explosive limit | No data available |
| Odor | Faint aromatic odor | Vapor pressure | 0.00016 mmHg |
| Odor threshold | No data available | Vapor density | 1.22 g/cm ³ |
| pH | No data available | Evaporation rate | No data available |
| Melting/freezing point | 37.4°F | Relative density | 1.22 |
| Boiling point, initial boiling point and boiling range | 392°F | Partition coefficient (n-octanol/water) | No data available |
| Flash point | 428°F | Solubility (water) | Moderately soluble |
| Auto-ignition temperature | > 482°F | Decomposition temperature | No data available |
| Flammability (solid, gas) | Not applicable | Bulk density | 10.17 lb/gallon |
| Flammability limit-lower% | Not applicable | Viscosity | 200 mPa/s |
| Flammability limit-upper% | Not applicable | VOC (weight %) | No data available |
| Oxidizing properties | Not applicable | Percent volatile | No data available |

SECTION 10: STABILITY AND REACTIVITY

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|---|--|
| Reactivity | Product reacts with water, alcohols, alkalis and amines. |
| Chemical stability | Product is stable if stored and handled as prescribed. |
| Possibility of hazardous reactions | Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength. Elevated temperatures can cause hazardous polymerization. Polymerization can be catalyzed by strong bases or water. |
| Conditions to avoid | Avoid contact with acids, amines, alcohols, water, alkalis and strong bases. Avoid unintended contact with Isocyanates. |
| Incompatible materials | Acids, amines, alcohols, water, alkalis, strong bases, and substance that react with isocyanates. |
| Hazardous decompositions products | Decomposition products include but are not limited to: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, and aromatic isocyanates. |

SECTION 11: TOXICOLOGICAL INFORMATION**General information on likely routes of exposure**

| | |
|-------------|---|
| Ingestion: | Ingestion may result in gastrointestinal discomfort or distress. |
| Inhalation: | Harmful if inhaled. May cause damage to olfactory organs through prolonged or repeated inhalation. Vapor from heated material or mist may cause respiratory irritation. Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above the PEL may result in bronchitis, bronchial spasms and pulmonary edema. Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Animal tests indicate that skin |

SECTION 11: TOXICOLOGICAL INFORMATION (CONT'D)

contact may play a role in causing respiratory sensitization. Animal tests and other research indicate that skin contact with MDI may play a role in causing respiratory sensitization.

Skin contact:

Causes skin irritation. May cause an allergic skin reaction.

Eye contact:

Causes eye irritation.

Symptoms:

May cause eye, skin and respiratory irritation. May cause damage to olfactory organs through prolonged or repeated inhalation. May cause allergy or asthma symptoms or breathing difficulties. May cause an allergic skin reaction. Harmful if inhaled.

Information on toxicological effects

Acute Toxicity:

Single dose oral and dermal LD50s has not been determined. Data provided for primary component diphenylmethane-4,4'-diisocyanate (MDI): Rat oral LD50 > 2,000 mg/kg, Rat dermal LD50 > 9,400 mg/kg. Inhalation toxicity, Rat LC50 = 2.0mg/L.

Eye Damage/Irritation:

Liquid can cause eye irritation, tearing, reddening and swelling. Permanent corneal injury is unlikely. Exposure to MDI vapors in excess of 0.02 ppm may cause irritation. Product contains Diphenylmethane-4,4'-diisocyanate (MDI) which is irritating to rabbit eyes in Draize tests.

Skin corrosion/Irritation:

May cause irritation or rash. Can cause skin discoloration. Repeated and/or prolonged contact may result in skin sensitization. Individuals who have skin sensitization can develop symptoms (e.g. reddening, swelling, rash) from contact with liquid or vapors. There is limited evidence from laboratory tests that skin contact may play a role in respiratory sensitization. Product contains Diphenylmethane-4,4'-diisocyanate (MDI) which is irritating to rabbit skin in Draize tests.

Respiratory/Skin Sensitization:

Sensitization after skin contact is possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapor-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Germ Cell Mutagenicity:

The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals. Information on diphenylmethane-4,4'-diisocyanate (MDI); Genetic toxicity in vitro:

SECTION 11: TOXICOLOGICAL INFORMATION (CONT'D)

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|---------------------------|--|
| Carcinogenicity: | OECD Guideline 471 Ames-test Salmonella typhimurium with and without metabolic activation; results ambiguous. The ingredients of this product (>0.1%) are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA and not listed as carcinogens by NTP. |
| Reproductive Toxicity: | Repeated inhalative uptake of the substance did not cause damage to the reproductive organs. |
| Developmental Effects: | The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals. OECD Guideline 414 rat Inhalation 0, 1, 4, 12 mg/m ³ , NOAEL Maternal 4 mg/m ³ , NOAEL Teratogenicity 4 mg/m ³ . |
| STOT – Single Exposure: | Vapor from heated material or mist may cause respiratory irritation. |
| STOT – Repeated Exposure: | The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. Information on diphenylmethane-4,4'-diisocyanate (MDI); Experimental/calculated data: rat (Wistar) (male/female) Inhalation 2 yrs, 6 hr/day 0, 0.2, 1, 6 mg/m ³ , olfactory epithelium NOAEL: 0.2 mg/m ³ LOAEL: 1 mg/m ³ . The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure. |
| Aspiration Hazard: | No data were identified for this product or its constituents. |
| Conclusion/Summary | May cause eye, skin and respiratory irritation. May cause damage to olfactory organs through prolonged or repeated inhalation. May cause allergy or asthma symptoms or breathing difficulties. May cause an allergic skin reaction. Harmful if inhaled. |

SECTION 12: ECOLOGICAL INFORMATION

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| Ecotoxicity | There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Toxicity to fish; LC0 (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static). Toxicity to aquatic invertebrates; EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static) Toxicity to aquatic plants; EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static). |
| Persistence and degradability | Poorly biodegradable. |

SECTION 12: ECOLOGICAL INFORMATION (CONT'D)

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| Bioaccumulative potential | Significant accumulation in organisms is not to be expected. Bioconcentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E). |
| Mobility in soil | Adsorption to solid soil phase is not expected. |
| Results of PBT and vPvB assessment | No data were identified for this product. |
| Other adverse effects | None known |
| Conclusion/Summary | Not classified for environmental hazards. |

SECTION 13: DISPOSAL CONSIDERATIONS**Waste treatment methods**

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| Residual waste: | Dispose of in accordance with applicable Federal regulations. |
| Contaminated packaging: | Dispose of in accordance with applicable Federal regulations. Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal. |
| Disposal methods/information: | Dispose in accordance with applicable Federal regulations. Incinerate or dispose if in a licensed facility. See Section 15 for CERCLA reportable quantities. |

SECTION 14: TRANSPORT INFORMATION**Classification in accordance with U.S. DOT, IMDG, and IATA:**

| | |
|-----------------------------------|---|
| UN Number | Not applicable, not regulated as hazardous for transport. |
| UN proper shipping name | Not applicable, not regulated as hazardous for transport. |
| Transport hazard class(es) | Not applicable, not regulated as hazardous for transport. |

SECTION 14: TRANSPORT INFORMATION (CONT'D)

| | |
|---|---|
| Packing group | Not applicable, not regulated as hazardous for transport. |
| Environmental hazards | Not applicable, not regulated as hazardous for transport. |
| Special precautions for user | Not applicable, not regulated as hazardous for transport. |
| Transport in bulk according to Annex II MARPOL73/78 and the IBC Code | Not applicable, not regulated as hazardous for transport. |

This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). See Section 15 for the RQ. The transport regulation may vary based on the country of use. Check for the appropriate regulations in the country of transport or usage of this product.

SECTION 15: REGULATORY INFORMATION
Safety, health and environmental regulations/legislation specific for the substance or mixture
USA Federal Regulations

| | |
|---|---|
| 29 CFR 1910.1200 Hazard Communication Standard (HCS): | Hazardous |
| TSCA - U.S. Inventory: | Exempt/Compliant |
| SARA Title III – Section 302, Extremely Hazardous Substances (EHS): | None Known |
| CERCLA - Hazardous substances: | Diphenylmethane-4,4'-diisocyanate (MDI) CAS: 101-68-8: RQ 5,000 lbs |
| SARA Title III – 311/312, Hazard Classes: | |
| Fire / Flammability | No |
| Reactivity | No |
| Release of Pressure | No |
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| SARA Title III – Section 313: | P-MDI CAS: 9016-87-9, Diphenylmethane-4,4'-diisocyanate (MDI) CAS: 101-68-8 |

USA State Regulations

| | |
|--------------------------------|---|
| Massachusetts – Right-to-Know: | P-MDI CAS: 9016-87-9, Diphenylmethane-4,4'-diisocyanate (MDI) CAS: 101-68-8, Methylenediphenyl diisocyanate CAS: 26447-40-5 |
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SECTION 15: REGULATORY INFORMATION (CONT'D)

New Jersey – Right-to-Know:
Pennsylvania – Right-to-Know:

P-MDI CAS: 9016-87-9, Methylenediphenyl diisocyanate CAS: 26447-40-5
Diphenylmethane-4,4'-diisocyanate (MDI) CAS: 101-68-8

Other Regulations

All shipping mailer packaging and packaging components, manufactured in the United States by Pregis Innovative Packaging, Inc., comply with the several United States' enacted provisions of the Coalition of Northeast Governors ("CONEG") legislative model for the reduction of toxics in packaging and the California Toxics in Packaging Prevention Act. Pregis Innovative Packaging, Inc.'s manufacturing practices prohibit the intentional introduction of cadmium (Cd), hexavalent chromium (Cr +6), lead (Pb), or mercury (Hg) into its products' formulations. Further, the cumulative total of all such metals' incidental concentrations does not exceed 100 parts per million (ppm).

SECTION 16: OTHER INFORMATION**List of abbreviations**

| | |
|--------|---|
| ACGIH | American Conference of Industrial Hygienists |
| CFR | Code of Federal Regulations |
| DOT | Department of Transportation |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IBC | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| IDLH | Immediately Dangerous to Life or Health |
| IMDG | International Maritime Dangerous Goods |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| NIOSH | National Institute for Occupational Safety and Health |
| NTP | National Toxicology Program |
| OSHA | Occupational Safety and Health Administration (United States) |
| PBT | Persistent, Bioaccumulative and Toxic |
| PEL | Permissible Exposure Limit |
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety Data Sheet |
| TSCA | Toxic Substances Control Act |
| TWA | Time Weighted Average |
| vPvB | Very Persistent and Very Bioaccumulative |

SECTION 16: OTHER INFORMATION (CONT'D)**SDS Revisions**

SDS prepared on 6 March 2015. SDS revised on 8 March 2018.

Disclaimer

Information provided by sources external to our company and set forth herein is offered in good faith as accurate, but without guarantee. Safety precautions contained herein cannot anticipate all individual and unique situations. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are, therefore, assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing herein is intended as recommendation for uses which infringe valid patents or as extension of license under valid patents. Appropriate warnings and safe handling procedures should be provided to users.