

SAFETY DATA SHEET

Section 1. Identification

Manufacturer

Korea Taconic Company

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Product Name: **TacBond 1.5**

Specific Use: Laminates for circuit boards

Section 2. Hazards Identification

Classification: This product as-sold is NOT classified as a hazardous chemical as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Label Elements: This product as-sold is NOT classified as a hazardous chemical as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Precautionary Statement: This product as-sold is NOT classified as a hazardous chemical as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Hazards Not Otherwise Classified: Before use refer to the “Guide to the Safe Handling of Fluoropolymer Resins”, published by the Society of the Plastics Industry.

Section 3. Composition/Information on Ingredients

Substance/Mixture:

| Ingredient Name | CAS Number | Weight % |
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| Chlorotrifluoroethene, 1,1-difluoroethene polymer (Copolymer Film) | 9010-75-7 | 100% |

Section 4. First Aid Measures

Description of Necessary First Aid Measures

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| Inhalation: | No special treatment needed. |
| Skin Contact: | No special treatment needed. |
| Eye Contact: | No special treatment needed. |
| Ingestion: | If product has been swallowed, get medical attention immediately. |

Most Important Symptoms/Effects, Acute and Delayed

Potential Acute Health Effects

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| Inhalation: | No known significant effects. |
| Skin Contact: | No known significant effects. |
| Eye Contact: | No known significant effects. |
| Ingestion: | No known significant effects. |

Over-Exposure Signs/Symptoms

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| Inhalation: | No known significant effects. |
| Skin Contact: | No known significant effects. |
| Eye Contact: | No known significant effects. |
| Ingestion: | No known significant effects. |

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

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| Notes to Physician: | No special treatment needed. |
| Specific Treatments: | No special treatment needed. |

Section 5. Fire-Fighting Measures

Suitable Extinguishing

Media: Water Spray, Carbon Dioxide (CO₂), Dry Chemical, Foam

Hazardous Thermal Decomposition

Products: Hydrochloric acid, hydrogen fluoride, carbonyl halides, carbon monoxide.

Special Protective Equipment and Precautions for Fire-Fighters:

Wear self-contained breathing apparatus and protective suit. Wear neoprene gloves during cleaning up work after a fire. Protect from hydrogen fluoride fumes which react with water to form hydrofluoric acid.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Refer to Sections 4, 5 and 8.

Methods and Materials for Containment and Cleaning Up:

Material for disposal should be placed in appropriate containers. Dispose of dry solids in a landfill that is permitted, licensed or registered, to manage industrial solid waste. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products.

Section 7. Handling and Storage

Precautions for Safe Handling:

No special handling precautions needed.

Conditions for Safe Storage, Including Any Incompatibilities:

Keep away from heat and sources of ignition.
Keep in a dry, cool, and well-ventilation location.
Keep away from direct sunlight.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits None.

Appropriate Engineering Controls:

No special controls needed.

Individual Protection Measures

Respiratory Protection: No special protective measures needed.
Eye/Face Protection: No special protective measures needed.
Hand Protection: No special protective measures needed.
Foot Protection: No special protective measures needed.

Section 9. Physical and Chemical Properties

Physical State: Solid.
Color: Clear.
Odor: Odorless.
Odor Threshold: Not applicable.
pH: Not applicable.
Melting Point: 190 - 206°C
Boiling Point: Not applicable.
Flash Point: Does not flash.
Evaporation Rate: Not applicable.
Flammability: Not flammable.
Explosive Limits: Not applicable.
Vapor Pressure: Not applicable.
Vapor Density: Not applicable.
Specific Gravity: 2.08 – 2.12 g/cm³
Solubility: Insoluble.
Auto-Ignition Temperature: Not applicable.
Decomposition Temperature: >250°C
Viscosity: Not applicable.

Section 10. Stability and Reactivity

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| Reactivity: | Not reactive under recommended storage conditions. |
| Chemical Stability: | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions: | Hazardous polymerization does not occur under recommended storage conditions. |
| Conditions to Avoid: | Keep away from heat and sources of ignition. Keep away from direct sunlight. Avoid excessive temperatures. |
| Incompatible Materials: | Strong oxidizers. |
| Hazardous Decomposition Products: | Hydrochloric acid, hydrogen fluoride, carbonyl halides, carbon monoxide. |

Section 11. Toxicological Information

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| Information on Likely Routes of Exposure: | Inhalation: No known significant effects. Skin Contact: No known significant effects. Eye Contact: No known significant effects. Ingestion: No known significant effects. |
| Acute Toxicity: | No known significant effects. |
| Skin Corrosion/Irritation: | No known significant effects. |
| Serious Eye Damage/Irritation: | No known significant effects. |
| Respiratory or Skin Sensitization: | No known significant effects. |
| Germ Cell Mutagenicity: | No known significant effects. |
| Carcinogenicity: | No known significant effects. |
| Reproductive Toxicity: | No known significant effects. |
| Specific Target Organ Toxicity Single Exposure: | No known significant effects. |
| Specific Target Organ Toxicity Repeated Exposure: | No known significant effects. |
| Aspiration Hazard: | No known significant effects. |

Section 12. Ecological Information

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| Aquatic Toxicity: | No known significant effects. |
| Terrestrial Toxicity: | No known significant effects. |
| Persistence and Degradability: | No known significant effects. |
| Bioaccumulative Potential: | No known significant effects. |
| Mobility in Soil: | No known significant effects. |
| Other Adverse Effects: | None of the components listed are Ozone Depleting Substances. |

Section 13. Disposal Considerations

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| Disposal Methods: | Disposal should be made in accordance with federal, state and local regulations. Dispose of dry solids in a landfill that is permitted, licensed or registered to manage industrial solid waste. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products. |
| RCRA Classification: | Not regulated. |

Section 14. Transport Information

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| DOT Hazardous Materials: | None of the components are listed. |
| DOT Marine Pollutants: | None of the components are listed. |
| Transport Information: | Not classified as dangerous goods according to the national and international regulations on the transport of dangerous goods. |
| Special Transport Precautions for User: | No special restrictions when transporting product. |

Section 15. Regulatory Information

United States Federal Regulations

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| Clean Air Act 112b HAPs: | None of the components are listed. |
| Clean Air Act 112r EHS: | None of the components are listed. |
| Clean Air Act 602 Class I Ozone Depleting Substances: | None of the components are listed. |
| Clean Air Act 602 Class II Ozone Depleting Substances: | None of the components are listed. |
| Clean Air Act SOCM I Chemicals: | None of the components are listed. |
| Clean Water Act 311: | None of the components are listed. |
| DHS Chemicals of Interest: | None of the components are listed. |
| OSHA PSM Highly Hazardous Chemicals: | None of the components are listed. |

SARA 302 EHS TPQ: None of the components are listed.

SARA 304 EHS RQ: None of the components are listed.

SARA 311/312: None of the components are listed.

SARA 313 TRI: None of the components are listed.

TSCA Chemical Substance Inventory: Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

TSCA HPV Chemical: None of the components are listed.

TSCA PMNACC Addendum: None of the components are listed.

TSCA 12(b) Chemicals Listings: None of the components are listed.

States Regulations

California Hazardous Substances: None of the components are listed.

California Proposition 65: None of the components are listed.

Delaware List of Chemicals: None of the components are listed.

Idaho Toxic Air Pollutants: None of the components are listed.

Illinois Toxic Air Contaminates: None of the components are listed.

Maine HAPs: None of the components are listed.

Massachusetts Hazardous Substances: None of the components are listed.

Michigan Critical Materials: None of the components are listed.

Minnesota Hazardous Substances: None of the components are listed.

New Jersey RTK: None of the components are listed.

New Jersey TCPA EHS: None of the components are listed.

New York Hazardous Substances: None of the components are listed.

North Carolina Toxic Air Pollutants: None of the components are listed.

Pennsylvania Hazardous Substances: None of the components are listed.

Washington PELs: None of the components are listed.

West Virginia Toxic Air Pollutants: None of the components are listed.

Wisconsin Hazardous Air Contaminates: None of the components are listed.

International Regulations

Australia Inventory of Chemical Substances (AICS): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Canada CEPA Toxic Substances: None of the components are listed.

Canada DSL Inventory: Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Canada NDSL Inventory: None of the components are listed.

Canada Priority Substances Lists: None of the components are listed.

China Inventory of Existing Chemical Substances (IECSC): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

EU Substances of Very High Concern: Does not contain REACH SVHCs greater than 0.1%.

EU REACH Classification: Article.

EU RoHS Substances: None of the components are listed.

EU WEEE Directive: Compliant.

Europe EINECS: None of the components are listed.

Japan Inventory of Existing & New Chemical Substances (ENCS): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Korea Existing Chemicals Inventory (KECI): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Malaysia EHS Register: None of the components are listed.

New Zealand Inventory of Chemicals (NZIoC): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Taiwan Inventory (CSNN): Listed; Chlorotrifluoroethene, 1,1-difluoroethene polymer, 9010-75-7.

Section 16. Other Information

NON-WARRANTY: The information provided in this Safety Data Sheet is based upon the research and experience of Taconic. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, and disposal and is not to be considered a warranty or quality specification. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified. No representation or warranty is made concerning the accuracy or completeness of the information presented in this publication.