

SAFETY DATA SHEET

1. Identification

| | |
|---|--|
| Product Identifier | 179-25S |
| Synonyms | 2-Ply tape with laminated structure based on silicone rubber/glass fabric/ 2 mil aluminium foil and silicone adhesive |
| Relevant identified use of the product | |
| Use of the Product | Plasma Spray Masking Tape best suited for grit blast resistance and some HVOF applications. |
| Restriction on Use | Not applicable. |
| Details of the supplier of the safety data sheet | |
| Company | Green Belting Industries Limited |
| Address | Mississauga ON L5T 2J3 Canada |
| Telephone | +1 905 564 6712 (08:30 to 17:00 Eastern Standard Time) |
| E-mail address | sds-support@greenbelting.com |
| Emergency Telephone Number | +1 905 564 6712 Available between the hours 08:30 to 17:00 (EST) |

2. Hazard Identification

Classification of the Product

| | | |
|------------------------------|-----------------------|----------------|
| Physical hazards | Flammable liquid | Category 3 |
| Health hazards | Reproductive toxicity | Category 3 |
| Environmental hazards | Not applicable | Not applicable |

Label Elements



| | |
|----------------------------|--|
| Signal Word | Warning |
| Hazard Statement(s) | Flammable liquid and vapour Suspected of damaging fertility or the unborn child |

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Precautionary Statement (s)

Prevention

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Use personal protective equipment as required.

Response

IF exposed or concerned: Get medical advice/attention.
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
 Rinse skin with water/shower.
 In case of fire: Use Carbon dioxide (CO₂), Foam, Dry Chemical for extinction.

Storage

Store in a well-ventilated place. Keep cool.
 Store locked up.

Disposal

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

Other Hazards

Use of this product is not normally considered hazardous, however material dust caused by cutting, sawing or sanding may cause eye or skin irritation. Processing at temperatures higher than 300°C will result in thermal decomposition and may release carbon monoxide, and silicon dioxide may also be released. In all cases avoid exposure, move the individual to fresh air and consult a physician if severe. Aluminum is slightly hazardous in case of skin contact (irritant) but non irritating to the eyes and non-hazardous in case of ingestion.

3. Composition/Information on Ingredients

Chemical Nature of the Mixture

Laminated silicone coated glass, silicone adhesive and aluminum foil

Mixtures

| Ingredient Name | CAS Number | EC Number | % by Weight |
|--|------------|------------|-------------|
| Glass Fiber (fiberglass cloth) | 65997-17-3 | 65997-17-3 | 16.0 |
| Polysiloxane Adhesive | 556-67-2 | 209-136-7 | 34.5 |
| Polyvinyl Chloride (inter-liner) | 9002-86-2 | 618-338-8 | 6.5 |
| Organopolysiloxane Mixture (Silicone Rubber) | 63148-62-9 | 613-156-5 | 15.5 |
| Aluminum Foil | 7429-90-5 | 231-072-3 | 27.5 |

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None of the product components are intentionally released during their use when used as intended and in accordance with recommended specifications and parameters.

For full text of the R-phrases mentioned in this Section, see Section 16.

For full text of the S-phrases mentioned in this Section, see Section 16.

For full text of the H-statements mentioned in this Section, see Section 16.

4. First Aid Measures

General Advice

Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.

Inhalation

N/A for material as supplied at room temperature and used as intended and in accordance with recommended specifications and parameters. At sustained high temperature processing fumes can be generated which could lead to irritation to the respiratory system. Remove to fresh air or if feeling unwell after prolonged exposure, seek medical attention.

If aluminum dust is inhaled remove to fresh air and in case of breathing difficulties seek medical attention immediately.

Inter-liner – if PVC decomposes due to overheating or contact with fire, remove affected persons to fresh air. In case of irritation of respiratory system or if feeling unwell after prolonged exposure, seek medical attention.

Skin Contact

Not normally considered hazardous, for material as supplied at room temperature and used as intended and in accordance with recommended specifications and parameters. Skin contact with adhesive fibrous dust may cause skin irritation. Wash with plenty of soap and water. If irritation persists get medical attention.

In case of aluminum contact with skin wash with soap and water. Cover any irritated skin with an emollient and if irritation develops seek medical attention.

Inter-liner – If contact with hot (melt) product occurs, wash with plenty of water and treat as for thermal burn.

Eye Contact

Product - material dust caused by cutting, sawing or sanding may cause eye irritation. Wash with plenty of soap and water. If irritation persists get medical attention.

In case of contact with aluminum immediately flush eyes with plenty of water for at least 15 minutes and seek medical attention if irritation occurs.

Inter-liner – After contact with hot (melt) product, immediately flush eyes with water for several minutes at least and get medical attention.

Ingestion

If swallowed get medical advice. Do not induce vomiting unless instructed to do so by medical personnel. If large quantities of this material are swallowed call a physician immediately and loosen any tight clothing.

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Most important symptoms and effects, both acute and delayed

Local irritation.
Potential health effects of acute inhalation include mechanical irritation of the mouth nose and throat.
Skin contact may cause temporary irritation, itching and inflammation usually caused by any fibers present.
Dust from this product may cause temporary irritation to the eyes.
Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath.
For inter-liner, after inhalation of decomposed products, symptomatic treatment (decontamination, vital functions), if necessary take action against irritation of the mucous membranes by HCl.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire Fighting Measures

Suitable extinguishing media

Water spray, Carbon dioxide (CO₂), Foam, Dry Chemical.

Unsuitable extinguishing media

Not applicable.

Specific hazards during fire fighting

Hazardous thermal decomposition products.
For product carbon oxides and silicon dioxide.
For PVC inter-liner – hydrogen chloride which upon contact with water forms hydrochloric acid.
Exposure to decomposition products can be a hazard to health.

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective suit. Wear neoprene gloves during cleaning up work after a fire.

Further information

For inter-liner protect from hydrogen chloride fumes which react with water to form hydrochloric acid.
Inter-liner will not burn without a flame (self-extinguishing).
Observe local regulations when contaminated water and burning waste are removed.

6. Accidental Release Measures

Personal precautions

For solid product none required.
For any dusts and fibers generated during processing use protective equipment to prevent the contamination of skin, eyes, and clothing.

Environmental Precautions

N/A - solid product.

Methods and materials for containment and cleaning up

For solid product collect with hands broom and shovel and place in non-hazardous waste collection container for disposal.
For dusts and fibers generated during fabrication vacuum up and containerize.

Reference to other sections

For disposal instructions see section 13.

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7. Handling and Storage

Precautions on safe handling

Solid product which presents minimal hazards to personnel when handling in accordance with operating and storage recommendations.

The primary health hazards associated with this product are the generation of fibrous dust during processing fabrication and the inhalation of thermal decomposition products when the product is subjected to temperatures greater than 300°C.

Provide appropriate exhaust ventilation at places where dust or volatiles can be generated and always wash hands thoroughly after handling.

For inter-liner avoid overheating the material, as it decomposes to gaseous components (see section 5). Thermal degradation does not occur at low temperatures, but becomes faster at higher temperatures.

Advice on protection against fire and explosion

Dispose of in accordance with local regulations as a solid non-hazardous waste and avoid inappropriate disposal practices.

Provide appropriate exhaust ventilation at places where fibers, dust or volatiles can be generated.

For inter-liner take precautionary measures against static discharge (i.e. using proper grounding techniques) when handling rolls or sheets in dry rooms (especially to avoid harm to people). Polyvinyl chloride (PVC) is not dust explosive in its delivered state.

Do not incinerate PVC waste.

Requirements for storage areas and containers

No special precautions necessary, but recommend storing in a dry cool place and protecting from contamination.

Advice on common storage

No special restrictions on storage with other products.

Storage temperature

Store in cool, dry conditions and avoid excessive temperatures.

Other data

Do not store in direct sunlight or in conditions of high humidity.

8. Exposure controls/personal protection

Control Parameters

In situations in confined spaces where the temperature exceeds 500°F (260°C), thermal degradation products may be produced. Exposure limits for these products, which include carbon monoxide, carbon dioxides, low molecular weight hydrocarbons and silicone dioxide, must not be exceeded.

In situations in confined spaces where the temperature of the inter-liner exceeds 248°F (120°C), thermal degradation products may be produced. Exposure limits for these products, which hydrogen chloride, must not be exceeded.

| | | |
|-------------------|--------------|-----------------|
| hydrogen chloride | TLV TWA | IDLH (NOISH) |
| | 2ppm ceiling | 50ppm |
| | STEL | |
| | 5ppm ceiling | |

PVC is recognized as safe, however it may contain trace amounts of vinylchloride monomer (VCM), CAS#: 75-01-04, EINECS#: 2008310.

MAK-Value: 2ppm (5mg/m³) Germany as TRK-value according to TRGS 102).

For supplied inter-liner, a VCM value of ≤ 0.5ppm is guaranteed.

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Given the special precautions mentioned in section 7, these traces present no toxic risk to the processing personnel. Gloves should be worn when handling hot material. Safety glasses are normally recommended for all industrial workplaces when handling hot material.

In situations where high levels of airborne dust/glass fibers are present specified exposure limits must not be exceeded

| OSHA-PEL | ACGIH-TLV | Other |
|--|---|---|
| 5mg/m ³ – nuisance dust | 5mg/m ³ - 8h TWA | 3 x 10 ⁶ fibers/m ³ |
| PEL (respirable dust fraction) | (inhalable) | 10h TWA (NIOSH) |
| 15mg/m ³ – 8h TWA (total dust fraction) | 1 fiber/cm ³ - 8h TWA (respirable) | |

Engineering measures

Processing may produce fibrous dust, therefore it is necessary to maintain exposures below recommended limits, so a properly designed dust collection system is recommended at the operation source. Adequate ventilation must be provided when working with the product at elevated temperatures.

Eye protection

Throughout basic product handling processes, and whenever handling materials containing fiberglass, safety glasses, goggles or face shields should be worn.

Hand protection

Throughout basic product handling processes, leather or synthetic fiber gloves are recommended to minimize cuts and abrasions.

Skin and body protection

The wearing of a loose fitting long sleeved shirt that covers to the base of the neck and long trousers is recommended to minimize exposure to fiberglass. Skin irritation from exposure to fiberglass is known to occur mostly at pressure points such as around the neck, wrist and waist.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practices. Wash hands immediately after handling the product. Be careful not to rub or scratch areas irritated from fiberglass exposure, as fibers may be forced into the skin. Wash off any fiberglass in contact with the skin, and consider the use of barrier creams which can minimize irritation. Always use vacuum equipment to remove fibers and dust from clothing and never use compressed air. Contaminated clothes should always be washed separately.

Respiratory protection

Not required for normal use of the product. In situations where high levels of airborne dust/glass fibers are present and which exceed permissible exposure limits, or irritation occurs, then a correctly fitting NIOSH/MHSA approved disposable dust respirator should be used. In situations in confined spaces where the temperature of the product exceeds 500°F (260°C), an air supplied respirator should be used. In situations where high levels of airborne dust/glass fibers or fume, use industrial hygiene monitoring to ensure that TLV or PEL values are not exceeded. Excessive exposure to thermal degradation products could result in delayed pulmonary edema and in some cases, and on very high exposure damage to the liver and kidneys.

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9. Physical and Chemical Properties

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|---|--|--|--|
| Appearance: | Silver foil laminate with yellow inter-liner | Upper/lower flammability or explosive limits: | Not applicable |
| Physical state: | Solid | Flammability (solid, gas): | Not applicable |
| Odour: | Odorless | Vapour pressure: | Not applicable |
| Odour threshold: | Not applicable | Vapour density: | Not applicable |
| pH: | Not applicable | Relative density: | Not applicable |
| Melting point/freezing point: | Not applicable to product Aluminium 660°C (1220°F) Inter-liner softening temperature 60-90°C Glass transition temp approx. 80°C | Solubility(ies): | Product - Insoluble Aluminium-Insoluble in water, soluble in alkalis and sulphuric acid Inter-liner soluble in tetrahydrofuran and cyclohexanone, partly soluble in some aromatic hydrocarbons |
| Flash point: | Not applicable | Auto-ignition temp: | Not applicable |
| Initial boiling point and boiling range: | Not applicable Aluminum 2327°C (4220°F) | Partition coefficient n-octanol/water: | Not applicable |
| Evaporation rate: | Not applicable | Decomposition temp: | Not applicable Inter-liner -> 150°C (long term contact) >200°C (short term contact) |
| Viscosity: | Not applicable | | |

10. Stability and Reactivity

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|---|--|
| Reactivity | Stable at normal ambient temperature and pressure. |
| Chemical stability | Product is chemically stable. |
| Possible hazardous reactions | Stable under recommended storage conditions. |
| Conditions to avoid | Avoid heating for prolonged periods above the recommended upper usage limit. |
| Incompatible materials | Strong bases, Hydrofluoric Acid. Aluminum is reactive with Oxidizing agents, Acids and Alkalis. |
| Hazardous decomposition products | May include: Carbon monoxide, carbon dioxide, silicon dioxide and metal oxides and hydrogen chloride for inter-liner. |

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11. Toxicological Information

Acute oral toxicity

Glass fiber diameter determines whether the fiber is respirable. NOISH has determined that man-made mineral fibers with diameters equal or greater than 3.5 microns are non-respirable. Respirable fibers will penetrate deep into the lungs. All E-glass continuous filament fiberglass has a fiber diameter larger than 3.5 microns and therefore are non-respirable.

No data available for product itself and Aluminum.

PVC inter-liner: Recognised as safe and biologically inert.

Primary Routes of Potential Exposure

Skin irritation

May cause skin irritation in susceptible persons. Some people who come into contact with this glass fiber experience reddening and itching of the skin. Those who are subject to this effect are most likely to experience it when handling the materials for the first time. People with a history of skin complaints may be particularly susceptible to irritation and therefore should minimize their contact with the material.

No data available for product itself.

Eye irritation

Eye Irritation. Entry of glass fiber into the eye will cause foreign body irritation. Carcinogenicity Continuous glass filament has been reported as a material 'Not classified as to human carcinogenicity'.

No data available for product itself.

Inhalation

Glass dust from this product is not regarded as respirable due to the large diameter of the continuous filaments used, and the levels of dust likely to arise from most operations, involving the handling and use of the materials, will be negligible.

No data available for product itself.

Sensitization

May cause skin irritation in susceptible persons.

No data available for product itself.

Repeated dose toxicity

Not applicable.

Mutagenicity assessment

Not applicable.

Carcinogenicity assessment

IARC, ACGIH and OSHA have found that the continuous fiberglass filaments are not considered to be carcinogenic based on human and animal tests conducted within the last 10 years.

No data available for the product itself.

Toxicity to reproduction assessment

Suspected of damaging fertility or the unborn child.

STOT-Single exposure

Not applicable.

STOT-Repeated exposure

Not applicable.

Aspiration hazard

Not applicable.

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12. Ecological Information

| | |
|---|---|
| Toxicity | The substance is a polymer and is not expected to produce toxic effects. PVC is not soluble in water (WKG 0 by supplier self- declaration). PVC is harmless in contact with fish and bacteria. In a water treatment plant, PVC can be separated mechanically. |
| Persistence and degradability | Not applicable. For aluminum hazardous short term products are not likely, however long term degradation products may arise. |
| Bio-accumulative potential | Not applicable. For aluminum the products of degradation are less toxic than the substance. |
| Mobility in soil | Not applicable. |
| Results of PBT and vPvB assessment | Not applicable. |
| Additional ecological information | No data is available on the product itself. |

13. Disposal Considerations

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|--|---|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Where possible, recycling is preferred to disposal or incineration. Dispose of in accordance with local regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. Transport Information

Transport ADR/RID/ADN

| | |
|-----------------------------------|-----------------|
| UN Number | Not Applicable. |
| UN Proper Shipping Name | Not Applicable. |
| Transport hazard class(es) | Not Applicable. |
| Packing group | Not Applicable. |

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Transport IMDG

| | |
|-----------------------------------|-----------------|
| UN Number | Not Applicable. |
| UN Proper Shipping Name | Not Applicable. |
| Transport hazard class(es) | Not Applicable. |
| Marine pollutant | Not Applicable. |
| Packing group | Not Applicable. |
| EmS | Not Applicable. |

Transport ICAO-TI / IATA

| | |
|-----------------------------------|-----------------|
| UN Number | Not Applicable. |
| UN Proper Shipping Name | Not Applicable. |
| Transport hazard class(es) | Not Applicable. |

Environmental hazards Not Applicable.

Other information Not Applicable.

Special precautions for user Not classified as dangerous in the meaning of transport.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code Not Applicable.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

| | |
|---|--|
| USA | |
| TSCA Status | May cause skin irritation in susceptible persons. All ingredients in the product are listed in the TSCA inventory. |
| SARA Title III | |
| Sec. 303/304 | None. |
| Sec. 311/312 | Not applicable. |
| Sec 313 | Not applicable. |
| CERCLA RQ | |
| California Prop 65 | This product does not contain chemicals known to the State of California to cause cancer of the reproductive system. |
| State Right-to-Know Lists | |
| | Massachusetts, New Jersey, Pennsylvania: This product does not contain any chemicals listed for state right to know purposes. |
| CANADA | |
| | This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. |
| WHMIS Classification (for workplace exposures) | |
| New Substance Notification Regulations | Not controlled. |
| | All ingredients in this product are listed, as required, on Canada's Domestic Substances List (DSL). |
| NPRI Substances | Not applicable. |

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EC Classification for the EC Substance/Preparation

| | |
|----------------------------------|--|
| Symbol | GHS02: Flammable GHS08: Health hazard |
| German Water Hazard Class | German Water Hazard Class WGK nwg. Non-water polluting substance. |
| Other regulations | Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. |

Chemical Safety Assessment No data available.

16. Other Information

Text of R-phrases referred to in Section 3 R53 - May cause long-term adverse effects in the aquatic environment
R62 - Possible risk of impaired fertility
R63 - Possible risk of harm to the unborn child

Text of S-phrases referred to in Section 3 S2 - Keep out of the reach of children
S36/37 - Wear suitable protective clothing and gloves
S46 - If swallowed, seek medical advice immediately and show this container or label
S51 - Use only in well-ventilated areas
S61 - Avoid release to the environment. Refer to special instructions /safety data sheet

Text of H-Statements referred to in Section 3 H226 - Flammable liquid and vapour
H361 - Suspected of damaging fertility or the unborn child

Preparation Information

Prepared by Green Belting Industries Limited
www.greenbelting.com

Revision Date June, 25, 2020

Revision Summary Updated contact information, removed obsolete product and styling. GHS requirements applied.

Abbreviations and acronyms

| Section | Abbreviation | Description |
|---------|------------------|---|
| 2 | CFR | Code of Federal Regulations |
| 3 | CAS | Chemical Abstracts Services |
| 3 | OSHA | Occupational Safety and Health Administration USA |
| 3 | ACGIH | American Conference of Governmental Industrial Hygienists |
| 3 | PEL | Permissible Exposure Limit |
| 3 | TLV | Threshold Limit Value |
| 3 | SVHC | Substances of Very High Concern |
| 8 | TWA | Time Weighted Average |
| 8 | STEL | Short-Term Exposure Limit |
| 8 | IDLH | Immediately Dangerous to Life or Health (NIOSH) |
| 8 | NIOSH | National Institute for Occupational Safety and Health |
| 8 | ppm | Parts per Million |
| 8 | ppb | Parts per Billion |
| 11 | LD ₅₀ | "Lethal Dose, 50%" or median lethal dose (amount of substance required by body weight to kill 50% of the test population) |

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| | | |
|----|-----------|---|
| 11 | STOT | Specific Target Organ Toxicity |
| 12 | PBT | Persistent, Bio-accumulative and Toxic |
| 12 | vPvB | Very Persistent and Very Bio-accumulative |
| 14 | DOT | Department of Transport |
| 14 | ADR | Agreement on Dangerous Goods |
| 14 | IATA | International Air Transport Association |
| 14 | ACAO | International Civil Aviation Organisation |
| 14 | IMO | International Maritime Organization |
| 14 | IMDG | International Maritime Dangerous Goods |
| 14 | TSCA | Toxic Substances Control Act |
| 15 | SARA | Superfund Amendments and Reauthorization Act |
| 15 | CERCLA RQ | Comprehensive Environmental Response Compensation and Liability Act |
| 15 | WGK | German Water Hazard Class |
| 15 | WHMIS | Workplace Hazardous Materials Information System |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.