

**Weifang Lakeland Safety Products Co. Ltd.**  
**Material Data Safety Sheet**

Spunbonded Polypropylene  
Products (ZONEGUARD®)

May 1, 1999

Human - Spunbonded Polypropylene worn for 72 hours produces no skin redness or swelling or skin sensitization. Lakeland has sold ZONEGUARD® fabrics as protective clothing primarily in the asbestos remediation field since 1994 without any dermatological reactions by human contact for extended exposure periods.

**Carcinogenicity Information**

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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**FIRST AID MEASURES**

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Mechanical irritation - remove particle. Seek medical help if irritation persists.

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**FIRE FIGHTING MEASURES**

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**Flammable Properties**

Products made from ZONEGUARD® are not intended for use in fire-retardant garments. Fabrics of ZONEGUARD® should not be used near heat, flame, sparks nor in explosive environments.

ZONEGUARD® fabric does not pass DOC FF 3017, "Children's Sleepwear Test" and does not pass NFPA 701.

Gases/vapors produced in fire from complete combustion of ZONEGUARD® are CO<sup>2</sup> and water. Incomplete combustion yields hazardous gases/vapors including CO, acrolein, other aldehydes, ketones, fatty acids and shortchain hydrocarbons.

**Static Discharge**

ZONEGUARD® styles can build a static charge during roll or sheet handling operations and care should be used when handling in areas where potential for flammable or explosive vapor/air mixtures exist. In low humidity conditions, all styles of ZONEGUARD®, whether they contain an anti-static coating or not, can build a static charge.

**ZONEGUARD® Products****Lakeland Material Safety Data Sheet****May 1, 1999****Extinguishing Media**Water, Dry Chemical, CO<sup>2</sup>**Exposure Guidelines**

Applicable Exposure Limits Polypropylene  
 PEL (OSHA) : None Established  
 TLV (ACGIH) : None Established  
 AEL : 10 mg/m<sup>3</sup>, 8 Hr. TWA, total dust  
 : 5 mg/m<sup>3</sup>, 8 Hr. TWA, respirable dust

\*AEL is Lakeland's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

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**PHYSICAL AND CHEMICAL PROPERTIES**


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**Physical Data:**

Melting Point : 110-140°C (230-284°F) @ mm HG  
 % Volatiles : <0.1 wt% @ 25°C (77°F)  
 Solubility in Water : Insoluble  
 Odor : Odorless  
 Form : Sheets or Rolls  
 Color : White  
 Specific Gravity : 0.95-1.00 g/cc

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**STABILITY AND REACTIVITY**


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**Chemical Stability**

Stable

Aromatic hydrocarbons, gasoline, lubricating oils, and halogenated hydrocarbons may soften and swell ZONEGUARD®.

**Incompatibility with Other Materials**

Products made from ZONEGUARD® should not be stored in contact with strong oxidizing agents, especially at elevated temperatures as is the case for most polymers.

**ZONEGUARD® Products      Lakeland Material Safety Data Sheet      May 1, 1999****Decomposition**

Exothermic oxidation starts to occur at 335°C (635°F). Auto-ignition occurs at 400°C (750°F).

Incomplete combustion yields hazardous gases/vapors including CO, acrolein, other aldehydes, ketones, fatty acids, and short-chain hydrocarbons.

**Polymerization**

Polymerization will not occur.

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**ECOLOGICAL INFORMATION**

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**Ecotoxicological Information**

Aquatic Toxicity  
Non-toxic - Insoluble

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**DISPOSAL CONSIDERATIONS**

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**Waste Disposal**

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

See Section on Regulatory Information under RCRA.

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**TRANSPORTATION INFORMATION**

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**Shipping Information****DOT/MO**

Proper Shipping Name : Lakeland - ZoneGuard

**DOT**

Hazard Class : Not regulated material  
I.D. No. (UN/NA) : Not regulated material  
DOT Label(s) : Not regulated material  
Subsidiary Hazard Class : Not regulated material  
Reportable quantity : Not regulated material

