



## Material Safety Data Sheet

**TSI Incorporated**  
**500 Cardigan Road**  
**Shoreview, MN 55126-3996**

24 hour Emergency telephone  
CHEMTREC: 1-800-424-9300

Outside US and Canada  
Chemtrec: 703-527-3887

Note: CHEMTREC number to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-874-2811) for assistance.

<b>Section 1.</b>	<b>CHEMICAL PRODUCT SECTION</b>
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Product Name: **Conductofil® Silver Coated Glass Spheres**  
Chemical Name: **Glass Oxide Coated with Silver**  
Product Number: **10087**

<b>Section 2.</b>	<b>COMPOSITION/INFORMATION ON INGREDIENTS</b>
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Chemical and Common Name	CAS Registry Number	Wt. %	OSHA EXPOSURE LIMIT (PEL)	ACGIH REC. LIMITS (TLV)
Soda Lime Glass;	<b>65997-17-3</b>	<b>80-96%</b>		
Silver	<b>7440-22-4</b>	<b>4-20%</b>		
Silver Coating:			<b>0.01mg/m3</b>	<b>0.1mg/m3</b>
Nuisance Dust:			<b>15MG/M3</b>	<b>5MG/M3</b>
Respirable fraction:			<b>5mg/m3</b>	<b>5mg/m3</b>

Exposure Analysis Method .....**IOSH Manual of Analytical Methods, 3<sup>rd</sup>. Method 7501 (1984)**

<b>Section 3.</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
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Appearance & Odor:	<b>Odorless white powder.</b>
Specific Gravity:	<b>2.5 – 2.7 g/cc</b>
Solubility In Water:	<b>Insoluble</b>
pH: (aqueous liquids only)	<b>N.A.</b>
Other Characteristics:	<b>Softening point 730°C</b>

<b>Section 4.</b>	<b>FIRE AND EXPLOSION HAZARD DATA</b>
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Flash Point (°F):	<b>Noncombustible and nonflammable</b>
Flammable limits Flash Point (vapor in air, vol. %):	<b>Not applicable</b>
Fire Extinguishing Media:	<b>CO2, dry chemical, foam.</b>
Special fire Fighting Procedures:	<b>Wear NIOSH approved mask for metal fumes if material is exposed to heat.</b>
Unusual Fire and Explosion Hazards:	<b>Silver dust is moderately flammable when exposed to flame or chemical oxidizers.</b>

<b>Section 5.</b>	<b>STABILITY AND REACTIVITY</b>
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STABILITY: (CONDITIONS TO AVOID)	<b>Stable</b> <b>High acidity, dusty conditions with heat, sparks or open flames.</b>
INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)	<b>Acetylene, ammonia, hydrogen peroxide.</b>
HARZARDOUS DECOMPOSITION PRODUCTS:	<b>Silver and silver oxide fumes.</b>
HAZARDOUS POLYMERIZATION:	<b>Will not occur.</b>

<b>Section 6.</b>	<b>SPILL OR LEAK PROCEDURES</b>
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ENVIRONMENT HAZARDS:	<b>Material may be classified as a CERCLA hazardous substance if the silver level exceeds the reported quantity. Water material may be subject to RCRA if leachable silver level exceed RCRA TCLP limit.</b>
SPILLAGE:	<b>Sweep up waste and put in closed container.</b>
WATER DISPOSAL METHOD:	<b>Disposal of in accordance with applicable federal, state, and local regulations; or send refinery for silver recovery.</b>
OTHER PRECAUTIONS:	<b>Spillage may cause slippery conditions. Keep containers tightly closed and store in dry area.</b>

**Section 7.****HEALTH HAZARD DATA**

HEALTH HAZARDS:	<b>Dust in excess of recommended exposure limits may result in irritation to the respiratory tract. Prolonged absorption of silver compounds can lead to grayish-blue discoloration of skin known as argyria</b>
ROUTE(S) OF ENTRY:	<b>Inhalation, skin, digestion.</b>
CARCINOGENICITY:	<b>Not listed under NTP, IARC Monographs, or OSHA.</b>
MEDICAL CONDITIONS:	<b>Chronic lung conditions may be aggravated by exposure to high concentrations of dust.</b>
OTHER CHARACTERISTICS:	<b>Contains no free silica; all components amorphous/non-crystalline.</b>

**Section 8.****FIRST AID MEASURES**

EMERGENCY AND FIRST AID PROCEDURES:	<b>Remove to fresh air. In exposed, flush eyes with water and wash skin with soap and water.</b>
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**Section 9.****HANDLING PRECAUTIONS**

Respiratory protection:	<b>Use NIOSH approved dust mask or respirator where airborne dust is generated. Observe OSHA regulations for respirator use (29 CFR 1910.134)</b>
Gloves:	<b>Solvent resistant recommended.</b>
Eye protection:	<b>NIOSH approved safety glasses or goggles.</b>
Other Protection Equipment:	<b>Apron or protective clothing recommended.</b>
Personal Hygiene:	<b>Wash exposed skin with soap and water. Flush exposed eyes with water.</b>
Engineering Control:	<b>Local exhaust is recommended for operations that generate nuisance dust in excess of OSHA exposure limits.</b>

**Sections 10.****OTHER INFORMATION**

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