

## NITTO DENKO AUTOMOTIVE NEW JERSEY, INC.

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## Section 1: Product and Company Identification

<b>Material Name</b>	P-100
<b>Description</b>	Aluminum and Fiberglass backed pressure sensitive adhesive tape
<b>Product Applications</b>	<ul style="list-style-type: none"> <li>&gt; high temperature heat and EMI/RFI shielding tape</li> <li>&gt; radiant heat shield for the protection of electrical control wiring and power cables, and other heat-sensitive devices in turbo-jet aircraft engine compartments, missile rocket engines, and missile launch pad areas</li> <li>&gt; mask in plasma metal spray applications</li> <li>&gt; electro-electro-magnetic interference (EMI) and radio frequency interference (RFI) is shielding on coils and other small electro-magnetic components</li> <li>&gt; enhancement of braid shielded cables and harnesses.</li> </ul>
<b>Emergency Phone</b>	732-901-7905
<b>Mailing Address</b>	1990 Rutgers University Blvd., Lakewood, NJ 08701, USA
<b>Date</b>	26-Sep-13

## Section 2: Hazards Identification

No test data available on finished product. Not expected to cause hazardous exposure.

<b>Inhalation</b>	Not a probable route of exposure unless metal and fibrous dust results from cutting operations. Dust can be irritating to the respiratory tract. If fibrous, respiratory irritation can develop. Fumes may be irritating.
<b>Skin</b>	No irritation expected. Sharp edges of metal can cause cuts. If fibrous, acute exposure to fiberglass may cause irritation
<b>Eye</b>	and transitory dermatitis. Symptom is itching. Fumes may be irritating. Not a probable route of exposure. If dust or fume are generated, irritation may develop.
<b>Ingestion</b>	Not a probable route of exposure.

**Potential Health Effects if dust or fumes are generated by processing:****Ingredient Health Effects:**

Chronic exposure to high levels of manganese dust or fumes can cause nervous system disorders (manganism), pneumonitis (inflammation of lung tissue), and may cause fibrosis (scarring of lung tissue) and reproductive disorders (impotence) in males.

Aluminum dust/fines and fumes are a low health risk by inhalation. For standard operations (milling, cutting, grinding), aluminum dust should be treated as a nuisance dust as defined by the ACGIH.

Inhalation of Nickel fume can cause metal fume fever, with flu-like symptoms, weakness, chest pain, muscle pain and metallic taste. An increased white blood cell count can result. Mist inhalation can cause respiratory tract irritation. Inhaling nickel dust or fume can cause a sore or hole in the septum of the nose.

Repeated skin contact can cause sensitization dermatitis and potential destruction and/or ulceration. May cause respiratory tract cancer. Nickel is toxic and can affect the liver, lungs, kidneys and nervous system. Nickel is considered to be a carcinogen by IARC, NTP and OSHA.

**Health Effects of Other Compounds****Formed in Processing:**

Overexposure to manganese oxide fumes can cause upper respiratory tract irritation and fever, chills, shortness of breath and malaise (metal fume fever).

Alumina is a low health risk by inhalation and should be treated as a nuisance dust as specified by the ACGIH.

See above for Nickel in the event of fume or dust.

### Section 3: Composition

	%	CAS#
Aluminum	10-15	7429-90-5
Copper	0.01-0.5	7440-50-8
Silicon	0.01-0.5	7440-21-3
Magnesium	0.01-0.5	7439-95-4
Manganese	0.01-0.5	7439-96-5
Iron	0.01-0.5	7439-89-6
Nickel *	0.01-0.5	7440-02-0
Fiberglass (backing)	35-40	65997-17-3
Silicone/Tetra silane	45 - 50	3555-47-3

\*US EPA SARA Title III TRI reportable substance

***This product is considered as an article in accordance with Regulation EC No 1907/2006 (REACH).***

### Section 4: First-Aid Measures

<b>Inhalation</b>	Not a probable route of exposure unless dust results from cutting operations. Dust can be irritating to the respiratory tract.
<b>Skin</b>	No irritation expected. If cut by product edge, clean and dress wound. Wash with soap and water after handling. Should irritation develop, contact physician.
<b>Eye</b>	Not a probable route of exposure. Should contact occur, flush with saline solution. Contact physician if irritation persists.
<b>Ingestion</b>	Not a probable route of exposure.

### Section 5: Fire-Fighting Measures

<b>Fire/Explosion:</b>	May be a potential hazard under the following conditions: Dust or fines dispersed in the air can be explosive. Chips, fines and dust in contact with water can generate flammable/explosive hydrogen gas. These gases could present an explosive hazard in confined or poorly ventilated spaces. Fines and dust in contact with certain metal oxides (e.g., rust). A thermite reaction, with considerable heat generation, can be initiated by a weak ignition source. Molten aluminum in contact with water/moisture or other metal oxides (e.g., rust). Moisture entrapped by molten aluminum can be explosive. Contact of molten aluminum with other metal oxides can initiate a thermite reaction. Toxic smoke and fumes can result at very high temperatures.
<b>Extinguishing Media:</b>	Use fire fighting methods and materials that are appropriate for fire. Use water spray on chips or turnings. For fines, dust or molten aluminum, use Class D extinguishing agents. DO NOT USE: Halogenated extinguishing agents on small chips/fines. Do not use water in fighting fires around molten aluminum.
<b>Fire Fighting Instructions:</b>	Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

### Section 6: Accidental Release

<b>Spill/Leak Procedure</b>	Due to the physical nature of this material, not expected. Should material be released, pick up to prevent slipping hazard.
<b>Protective Equipment</b>	Wear respiratory protection in the event of fire as outlined in section 5. To avoid contact with glass cloth and sharp metal cover arms and legs, wear gloves.

### Section 7: Handling & Storage

<b>Handling</b>	Wash thoroughly after handling.
<b>Storage</b>	Store in an area away from heat, sparks and flames.

### Section 8: Exposure Controls & Personal Protection

<b>Ventilation</b>	Good general ventilation sufficient for most conditions. The need for added ventilation will depend on film quantity, temperature and exposure time combined.
<b>Eye Protection</b>	Recommended as good industrial practice.
<b>Skin Protection</b>	Gloves recommended as good industrial practice. It is good practice to cover arms and legs for protection and to avoid cuts from sharp edges.
<b>Respiratory Protection</b>	No special requirements for normal use unless fumes will be generated.

## Section 9: Physical & Chemical Properties

<b>% Volatility</b>	<1%
<b>Solubility In Water</b>	Insoluble
<b>Appearance</b>	Aluminum/Fiberglass backed pressure sensitive adhesive tape
<b>Melting Point</b>	900 - 1220 F (482-660 C) (Aluminum)

## Section 10: Stability & Reactivity

<b>Stability</b> <i>(stability is often dependent on the physical form of aluminum and circumstances of use)</i>	<p>Stable under normal conditions of use, storage, and transportation. Chips, fines, dust and molten aluminum are considerable more reactive with the following:</p> <p><b>Water:</b> Slowly generates flammable/explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g., fines and dusts). Molten aluminum can react violently/explosively with water or moisture, particularly when the water is entrapped.</p> <p><b>Heat:</b> Oxidizes at a rate dependent upon temperature and particle size.</p> <p><b>Strong oxidizers:</b> Violent reaction with considerable heat generation. Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) when heated or molten.</p> <p><b>Acids and alkalis:</b> Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly with smaller particles (e.g., fines and dusts).</p> <p><b>Halogenated compounds:</b> Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided aluminum.</p> <p><b>Iron oxide (rust) &amp; other metal oxides (e.g., copper &amp; lead oxides):</b> A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation.</p> <p><b>Iron powder:</b> An explosive reaction forming hydrogen gas occurs when heated above 1470°F (600°C).</p> <p><b>Molten aluminum can react violently without external ignition source.</b></p>
<b>Incompatibilities</b>	See above.
<b>Potential Decomposition Products</b>	In the event of fire, smoke may contain unidentified toxins or irritants. Products of combustion include carbon monoxide, carbon dioxide, hydrogen chloride, chlorinated hydrocarbons and partially oxidized hydrocarbons. metallic fumes and dense smoke.
<b>Hazardous Polymerization</b>	Not expected.

## Section 11: Toxicological Information

This finished product does not have corresponding toxicological information.

## Section 12: Ecological Information

<b>Aquatic Toxicity</b>	Insoluble
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## Section 13: Disposal

<b>Disposal</b>	Dispose of in accordance with state and local regulations.
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The Customer is responsible for the proper disposal of any waste generated as a result of the use of the Product or of the Product itself, and is responsible for complying with all applicable laws, rules and regulations relating to the management, storage, treatment, shipment and disposal of such waste or Product ("Waste Management Practices"). "Product" includes anything sold by Nitto Denko Corporation and/or any affiliates or subsidiaries ("Company") to Customer.

The Company is not responsible for any of the Customer's Waste Management Practices. As part of those practices, Customer must separate packaging from Product before disposal. Further, Customer should review and comply with this MSDS prior to any such disposal.

Customer shall hold harmless the Company, its agents, contractors, successors and assigns from any and all liability, claims, loss, damage, death or injury, including reasonable attorneys fees and costs, arising out of or relating to Customer's Waste Management Practices.

#### Section 14: Transport Information

United States Dept. of Transportation:

Non regulated

#### Section 15: Regulatory Information

EU Directive 2002/95/EC, Restriction of Hazardous Substances (ROHS): Compliant

**Fiberglass (Continuous Filament):** Classified as a Group 3 Carcinogen by IARC; Group 3 Carcinogens are "Not classifiable as to its carcinogenicity to humans" according to IARC; OSHA, NTP and ACGIH do not classify continuous filament fiberglass as a carcinogen.

**Nickel:** considered to be a carcinogen by IARC, NTP and OSHA.

#### Section 16: Other Information

**References:** Backing Safety Data Sheet

Although the information in this document has been researched in good faith based on data available, Nitto Denko Automotive New Jersey, Inc., makes no warranty, expressed or implied regarding the accuracy or completeness of the information contained herein and the results to be obtained from the application of this information. Each user of this material should review this information and determine applicability based on their specific application(s). FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

In accordance with OSHA, this product is considered an article. 29 CFR 1910.1200 (b)(6)(v) exempts articles from the Hazard Communication requirements and therefore does not require that a Safety Data Sheet be provided for this product, however it is offered at the request of our customers.