Safety Data Sheet (SDS)

Material Name: Polymetal

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information
Nudo
1500 Taylor Avenue
Springfield, IL  62703

** ** Section 2 - Hazards Identification ** **

Emergency Overview
No specific hazards anticipated from normal product handling. Dust and other particulates generated during cutting, shaping, or forming may cause eye, skin, and respiratory tract irritation.

Potential Health Effects: Eyes
Dusts and particulates may cause eye irritation.

Potential Health Effects: Skin
Dusts and particulates may cause skin irritation.

Potential Health Effects: Ingestion
Not a likely route of exposure under normal product use conditions.

Potential Health Effects: Inhalation
Dusts and particulates may cause respiratory tract irritation.

HMIS Ratings: Health: 1 Fire: 0 HMIS Reactivity 0
Hazard Scale: 0 = Minimal  1 = Slight  2 = Moderate  3 = Serious  4 = Severe  * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>7429-90-5</td>
<td>Aluminum</td>
</tr>
<tr>
<td>9002-88-4</td>
<td>Polyethylene</td>
</tr>
<tr>
<td>7439-95-4</td>
<td>Magnesium</td>
</tr>
<tr>
<td>Not Available</td>
<td>Coatings</td>
</tr>
<tr>
<td>7439-96-5</td>
<td>Manganese</td>
</tr>
<tr>
<td>7440-21-3</td>
<td>Silicon</td>
</tr>
<tr>
<td>7439-89-6</td>
<td>Iron</td>
</tr>
<tr>
<td>7440-47-3</td>
<td>Chromium</td>
</tr>
</tbody>
</table>

*** Section 4 - First Aid Measures ***

First Aid: Eyes
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Eye injuries from glass particles should be treated by a physician immediately.

First Aid: Skin
For skin contact flush with large amounts of water. If irritation persists, get medical attention.

First Aid: Ingestion
If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

First Aid: Inhalation
Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards
See Section 9 for Flammability Properties.
None anticipated.

Hazardous Combustion Products
Not Determined

Extinguishing Media
Use appropriate extinguishing media suitable for surrounding fire.
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Fire Fighting Equipment/Instructions
Firefighters should wear full protective gear.

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures
None necessary.

Clean-Up Procedures
No special cleanup procedures needed.

Evacuation Procedures
None

Special Procedures
None

*** Section 7 - Handling and Storage ***

Handling Procedures
Avoid dust generation.

Storage Procedures
No special storage procedures needed.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

Aluminum (7429-90-5)
- ACGIH: 1 mg/m³ TWA (respirable fraction)
- OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)
- NIOSH: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable dust)

Manganese (7439-96-5)
- ACGIH: 0.2 mg/m³ TWA
- OSHA: 1 mg/m³ TWA (fume)
- 3 mg/m³ STEL (fume)
- 5 mg/m³ Ceiling
- NIOSH: 1 mg/m³ TWA (fume)
- 3 mg/m³ STEL

Silicon (7440-21-3)
- OSHA: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)
- NIOSH: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable dust)

Chromium (7440-47-3)
- ACGIH: 0.5 mg/m³ TWA
- OSHA: 1 mg/m³ TWA
- NIOSH: 0.5 mg/m³ TWA

Engineering Controls
Ventilation is not normally required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/face
- Wear dust goggles.

Personal Protective Equipment: Skin
- None necessary.

Personal Protective Equipment: Respiratory
- Not normally needed.

Personal Protective Equipment: General
- None
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*** Section 9 - Physical & Chemical Properties ***

Appearance: Multi-colored
Physical State: Solid
Vapor Pressure: ND
Boiling Point: ND
Solubility (H2O): ND
Evaporation Rate: NA
Octanol/H2O Coeff.: ND
Flash Point Method: ND

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>ND</td>
</tr>
<tr>
<td>Melting Point</td>
<td>ND</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>ND</td>
</tr>
<tr>
<td>VOC</td>
<td>ND</td>
</tr>
<tr>
<td>Flash Point</td>
<td>ND</td>
</tr>
<tr>
<td>Upper Flammability Limit (UFL)</td>
<td>ND</td>
</tr>
<tr>
<td>Lower Flammability Limit (LFL)</td>
<td>ND</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>ND</td>
</tr>
</tbody>
</table>

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability
This is a stable material.

Chemical Stability: Conditions to Avoid
Avoid dust generation.

Incompatibility
Not Determined

Hazardous Decomposition
Not Determined

Possibility of Hazardous Reactions
Will not occur.

*** Section 11 - Toxicological Information ***

Acute Dose Effects
A: General Product Information
No information available for the product.

B: Component Analysis - LD50/LC50
Polyethylene (9002-88-4)
Inhalation LC50 Mouse 12 g/m3 30 min

Magnesium (7439-95-4)
Oral LD50 Rat 230 mg/kg

Manganese (7439-96-5)
Oral LD50 Rat 9 g/kg

Iron (7439-89-6)
Oral LD50 Rat 984 mg/kg

Silicon (7440-21-3)
Oral LD50 Rat 3160 mg/kg

Carcinogenicity
A: General Product Information
No information available for the product.

B: Component Carcinogenicity
Aluminum (7429-90-5)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
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Polyethylene (9002-88-4)
   IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Chromium (7440-47-3)
   ACGIH: A4 - Not Classifiable as a Human Carcinogen
   IARC: Monograph 49 [1990] (listed under Chromium and Chromium compounds); Supplement 7 [1987] (Group 3 (not classifiable))

*** Section 12 - Ecological Information ***

Ecotoxicity
   A: General Product Information
      No information available for the product.
   B: Component Analysis - Ecotoxicity - Aquatic Toxicity
      Iron (7439-89-6)
      | Test & Species | Conditions |
      |----------------|------------|
      | 96 Hr LC50 Morone saxatilis | 13.6 mg/L [static] |
      | 96 Hr LC50 Cyprinus carpio | 0.56 mg/L [semi-static] |

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers
   Chromium (7440-47-3)
      RCRA: 5.0 mg/L regulatory level

Disposal Instructions
   Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
   See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information
   Shipping Name: Not Regulated

TDG Information
   Shipping Name: Not Regulated

*** Section 15 - Regulatory Information ***

US Federal Regulations

Component Analysis
   This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).
   Aluminum (7429-90-5)
      SARA 313: 1.0 % de minimis concentration (dust or fume only)
   Manganese (7439-96-5)
      SARA 313: 1.0 % de minimis concentration
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Chromium (7440-47-3)
CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

State Regulations

Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Magnesium</td>
<td>7439-95-4</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Silicon</td>
<td>7440-21-3</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Component Analysis - WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>1 %</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>1 %</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>0.1 %</td>
</tr>
</tbody>
</table>

Additional Regulatory Information

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>9002-88-4</td>
<td>Yes</td>
<td>DSL</td>
<td>No</td>
</tr>
<tr>
<td>Magnesium</td>
<td>7439-95-4</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Silicon</td>
<td>7440-21-3</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
</tbody>
</table>

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

US – California Proposition 65 – Carcinogens & Reproductive Toxicity (CRT): Listed substance

<table>
<thead>
<tr>
<th>Substance</th>
<th>Type</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Cancer</td>
<td>207.2</td>
</tr>
<tr>
<td>Lead</td>
<td>Developmental - All Genders</td>
<td>207.2</td>
</tr>
<tr>
<td>Benzene</td>
<td>Cancer</td>
<td>71-43-2</td>
</tr>
<tr>
<td>Benzene</td>
<td>Developmental - Male</td>
<td>71-43-2</td>
</tr>
<tr>
<td>Carbon black (airborne, unbound particles of respirable size)</td>
<td>Cancer</td>
<td>1333-86-4</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>Cancer</td>
<td>91-20-3</td>
</tr>
<tr>
<td>Titanium dioxide (airborne, unbound particles of respirable size)</td>
<td>Cancer</td>
<td>---</td>
</tr>
</tbody>
</table>

*** Section 16 - Other Information ***

Other Information
The information herein is presented in good faith and believed to be accurate as of the effective date given.
Safety Data Sheet

Material Name: Polymetal

However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration, NJTSR = New Jersey Trade Secret Registry.

End of Sheet