MATERIAL SAFETY DATA SHEET
Meeting OSHA Standard 29 CFR 1910.1200 (g)

MOONEY CHEMICALS, INC.
2301 Scranton Road
Cleveland, Ohio 44113

Effective Date: 11/15/91. Supersedes:

SECTION I: IDENTIFICATION AND EMERGENCY INFORMATION

TRADE NAME: NICKEL OXIDE-BLACK
PRODUCT CODE: 575
PRODUCT DESCRIPTION: Dark Crystals, No Odor
AFTER HOURS TELEPHONE NO. 814-432-2125
BUSINESS HOURS TELEPHONE NO. 216-781-8383

SECTION II: COMPONENTS AND HAZARD INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NO.</th>
<th>% WT.</th>
<th>EXPOSURE GUIDELINES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PEL TWA</td>
</tr>
<tr>
<td>Nickel Oxide</td>
<td>1313-99-1</td>
<td>&gt;99</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TLV TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OSHA 29 CFR 1910.1000 Table Z-1-A (Final Rule) TWA list for Nickel, soluble compounds

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)
Health: 0 Flammability: 0 Reactivity: 0 Protective Equipment: E

*Nickel Oxide is a known carcinogen.

SECTION III: PRIMARY ROUTES OF ENTRY AND EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: May cause eye irritation. Flush with large amounts of water, lifting upper and lower lids occasionally. Get medical attention.
SKIN: May cause allergic skin irritation. Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use.
INHALATION: May be harmful if inhaled. May cause cancer. May cause respiratory irritation. If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing is stopped, give artificial respiration. Keep person warm, quiet. Get medical attention.
INGESTION: May be harmful if swallowed. Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician. Never give anything by mouth to an unconscious person.
SECTION IV: FIRE AND EXPLOSION HAZARD INFORMATION

Flash Point (Minimum)°F: Not Applicable

Handling Precautions
Avoid generating dust. Do not breathe dust. Keep container tightly closed.
Store in a cool dry place.

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES
Water spray (fog) dry chemical, carbon dioxide.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS
Toxic fumes and metal oxides may be present during decomposition.

"EMPTY" CONTAINER WARNING:

SECTION V: HEALTH AND HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE (Signs and Symptoms of Exposure)
Product is harmful if swallowed, inhaled or absorbed through skin. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Product can cause dermatitis, allergic respiratory reaction. Chronic effects include cancer.

NATURE OF HAZARD AND TOXICITY INFORMATION

Carcinogenicity: NTP: Yes XX No
IARC: XX Yes No
OSHA: 

Code 575 Page 2 of 4
SECTION VI: PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

Boiling Point: N/A

Vapor Density (Air = 1)
Heavier than air

Evaporation Rate
N/A

Odor: No odor

Vapor Pressure: N/A

% Volatile by Weight: N/A

% Volatile by Volume: N/A

Apparent bulk density: 1.0 grams per cubic centimeter

Color: Dark Green

SECTION VII: REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur.

SECTION VIII: ENVIRONMENTAL INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all sources of ignition (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Ventilate area of spill. Pick up the spill in a container for disposal. Wash area with water.

Dispose in closed containers in accordance with local, state and federal regulations.

SECTION IX: PROTECTION AND PRECAUTIONS

VENTILATION: Provide sufficient mechanical (general) and/or local exhaust ventilation to maintain exposure below TLVs.

RESPIRATORY PROTECTION: A NIOSH/MSHA jointly approved self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive mode is advised; however, OSHA regulations also permit other NIOSH/MSHA respirators under specified conditions.

PROTECTIVE GLOVES: Wear resistant gloves such as Neoprene.

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other types of safety glasses.

OTHER PROTECTIVE EQUIPMENT: Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES/ENGINEERING CONTROLS
Keep containers and storage containers closed when not in use. Do not store near heat, sparks, flame or open flames.

PERSONAL HYGIENE: Minimize breathing dust. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry clean before reuse. Remove contaminated shoes and thoroughly clean before reuse. Wash thoroughly after contact, before breaks and meals, and at the end of the day.
SECTION X: TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION
For further information relative to spills resulting from transportation incidents, refer to the latest Department of Transportation Emergency Response Guidebook, DOT P 5800.5—Guide #26.

DOT IDENTIFICATION NUMBER

Classifications: DOT Shipping Name: Not Regulated
DOT Hazard Class: Not Regulated
UN or NA Number:

Material with a flash point of 100°F - 200°F are subject to the Hazardous Material Regulations only in 110 gallon containers or larger - 49 CFR 173.118 (a).

INTERNATIONAL TRANSPORTATION:

Hazardous Material: XX Yes _____ No
For further information, refer to the latest INCO Regulations.

AIR FREIGHT TRANSPORTATION:

Hazardous Material: XX Yes _____ No
For further information, refer to the latest ICAO Regulations or IATA Regulations.

SECTION XI: SPECIAL COMMENTS

TSCA: All components are listed on TSCA Inventory: XX Yes _____ No

SARA:

Section 302 Extremely Hazardous Substance List - 40 CFR 355 ______ Yes, XX No
Section 313 Toxic Chemical List - 40 CFR 372.65 ______ Yes, XX No

CAS No. Chemical Name % by Weight % by Weight
N/A Nickel Compounds

CECERA: Hazardous Substance List - 40 CFR 302.4 ______ Yes, XX No

EQ Lbs.: ________

The information and recommendations contained herein are, to the best of Mooney’s knowledge and belief, accurate and reliable as of the date issued. Mooney does not warrant or guarantee their accuracy or reliability, and Mooney ASSUMES NO LIABILITY. No warranties of merchantability, fitness or otherwise are created. MOONEY SHALL NOT BE LIABLE FOR SPECIAL INCIDENTAL AND CONSEQUENTIAL DAMAGES.