Section 1: Identification

Product Name **EMCaulk**
Product Code **4FS031**
Manufacturer Faraday Structures (a division of the Conductive Group)
375 West 910 South
Heber City, Utah 84032
info@conductive.com
Telephone (technical) +1 (435) 654-3683

Relevant identified uses of the substance or mixture and uses advised against
Product Use Professional applications only
Use of the substance Caulking or sealing conductive or shielding applications
Uses advised against None known

Section 2: Hazard(s) Identification

OSHA / HCS status: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS contains important information for the successful use and handling of the product. Maintain a copy of this document for employees and users of the product.

Classification of the Substance or Mixture:
Not Classified.

GHS Label Elements:
Hazard Pictogram:

Signal Word: Danger

Hazard Statement: May cause skin and eye irritation
May cause cancer
May cause genetic defects
May cause damage to organs through prolonged exposure

Precautionary statements:
General: Read label before use. Keep out of reach of children.

Prevention: Use proper "personal protective equipment" (PPE) as required; gloves as needed. Use of a barrier cream on exposed skin may provide additional protection. Wash hands thoroughly after handling.

Response: Not applicable.

Storage: Store in dry location at temperatures between 50 °F – 90 °F (10 °C to 33 °C).

Disposal: Dispose of contents and container in accordance with all local, regional, national, and international regulations.

Supplemental label elements: May emit toxic fumes when heated.

Hazards not otherwise classified: None known.

Section 3: Composition/Information on Ingredients

Substance / mixture: Mixture.

Ingredient Name	Typical Composition	C.A.S. Number	EINECS Number
Nickel (Ni)	20 - 60 %	7440-02-0	231-111-4

Based on product and formula knowledge, there are no additional ingredients present which are classified as hazardous to health and thereby are not required to be reported in this section. Occupational exposure limits, if available, are listed in Section 8.

Section 4: First-Aid Measures

EYE CONTACT: Check for and remove any contact lenses. Immediately flush eyes with running water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 15 minutes. Seek medical attention.

INHALATION: Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

INGESTION: Rinse mouth with water. Do not induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing, wash affected area with soap and warm water. To avoid further irritation, do not rub or scratch the irritated areas. Seek medical attention if symptoms develop or persist.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

EYE CONTACT: May cause serious eye irritation.

INHALATION: Exposure to decomposition products may cause health hazard. Serious effects may be delayed.

SKIN CONTACT: May cause skin irritation.

INGESTION: Irritation to the mouth, throat, and stomach.

OVER-EXPOSURE SIGNS / SYMPTOMS:

EYE CONTACT: Adverse symptoms may include: pain, watering, reddening.

INHALATION: No specific data.

SKIN CONTACT: Adverse symptoms may include: irritation, redness.

INGESTION: No specific data.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NECESSARY:

NOTES TO PHYSICIAN: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Otherwise treat symptomatically.

SPECIFIC TREATMENTS: No specific treatment.

PROTECTION TO FIRST RESPONDERS: No action shall be taken involving any personal risk without proper, suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation if the exposed person inhaled or ingested material. Wash contaminated clothing thoroughly with water before removing. Wear disposable gloves.

Section 5: Fire-Fighting Measures

FLAMMABILITY OF THE PRODUCT: Use an extinguishing agent suitable for the surrounding fire

EXTINGUISHING MEDIA: Use extinguishing agent suitable for surrounding material and type of fire.

UNSUITABLE EXTINGUISHING MEDIA: None known.

OXIDIZING PROPERTIES: Not oxidizing

SPECIFIC HAZARDS ARISING FROM THE MATERIAL: May emit toxic metal oxide fumes under certain fire, combustion, or high temperature conditions. A container of this material may burst if exposed to fire or high temperatures. This material is harmful to aquatic life. Water contaminated with this material from a fire situation should be contained and prevented from discharge into any waterway, sewer, or drain.

HAZARDOUS THERMAL DECOMPISITION PRODUCTS: Carbon monoxide (CO), carbon dioxide (CO_2), carbonyl halides, nickel oxides.

SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS: Promptly isolate the scene and remove all persons in the vicinity of the accident if there is a fire. No action shall be taken involving any personal risk without proper training.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: Use full face, self-contained breathing apparatus, and full protective clothing when necessary.

Section 6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:

FOR NON-EMERGENCY PERSONNEL: No action shall be taken involving any personal risk or without proper training. Use appropriate personal protective equipment. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Use appropriate personal protective equipment.

FOR EMERGENCY RESPONDERS: If specialized clothing is required to deal with the spillage, refer to any relevant information in Section 8 on suitable and unsuitable materials.

ENVIRONMENTAL PRECAUTIONS: Avoid spreading of spilled material into soil, waterways, drains, or sewers. Inform proper authorities if the product has caused any environmental release or exposure to the above areas. Water polluting material. May be harmful to the environment if released in large quantities.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:

SMALL SPILL: Stop leak if without risk. Remove containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

LARGE SPILL: Stop leak if without risk. Remove containers from spill area. Prevent entry into waterways, drains, or sewers. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite, or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7: Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

PROTECTIVE MEASURES: Wear appropriate personal protective equipment (PPE) (see Section 8). Do not allow contact with eyes or mucous membranes. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, keep tightly closed when not in use. Empty containers may retain some product residue and can be hazardous. Do not reuse containers. Note, this material is electrically conductive. Avoid repeated or continuous skin contact. Always wear suitable disposable gloves.

ADVICE ON GENERAL HYGIENE: Eating, drinking, and smoking should be prohibited in areas where this material is being handled, stored, processed, or used. Workers should wash hands and face after use and before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

CONDITIONS FOR SAFE STORAGE:

Store at temperatures between 50 °F to 90 °F (10 °C to 33 °C). Do not expose containers of the material to temperatures below 41 °F (5 °C). Store in original container in a cool, dry, well ventilated area protected from direct sunlight. Store away from incompatible materials (see Section 10) and food and drink. Keep containers tightly closed and sealed until ready for use. Containers that have been opened must be carefully re-sealed and kept upright to prevent leakage or premature drying. Do not store in unlabeled containers.

Section 8: Exposure Controls/Personal Protection

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS: None.

APPROPRIATE ENGINEERING CONTROLS: Good general ventilation will aid in drying and minimize exposure to the worker.

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work processing equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

INDIVIDUAL PROTECTION MEASURES:

EYE/FACE PROTECTION: Safety eyewear complying with an approved safety standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

SKIN PROTECTION: Wear chemical resistant, impervious, disposable gloves to protect hands. Wear protective clothing such as a loose fitting, long sleeved, shirt that covers the arms and neck, long pants, and shoes that cover the entire foot.

RESPIRATORY PROTECTION: Not ordinarily required. If sufficient vapor or fumes are generated during application, use a NIOSH approved organic vapor respirator.

VENTILATION: Use local exhaust to control vapor, particulates, and dust, below acceptable exposure limits. If exhaust ventilation is not available or is inadequate, use a NIOSH approved respirator, as appropriate. Discharge from the ventilation system should comply with applicable air pollution control regulations.

GENERAL HYGIENE RECOMMENDATIONS: Before eating, drinking, smoking, or using toilet facilities, wash face and hands thoroughly with soap and water. Use vacuum equipment to remove dry product, dust, fibers, or particulate from clothing and work areas. Use of compressed air to remove material is NOT recommended.

Section 9: Physical and Chemical Properties

Physical State:	Paste
Color:	Medium / dark gray
Odor:	Mild acrylic / acrylate
pH:	7.5 – 8.5 typical
Viscosity:	Not applicable
Melting Point:	Not applicable
Boiling Point of Resin	> 40 °C (104 °F)
Flash Point	Closed cup: >93 °C (200°F)
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Evaporation Rate:	0.35 (of solvent portion, butyl acetate = 1)
Flammability:	Not available
Lower Explosive Limit:	Not available
Upper Explosive Limit:	Not available
Vapor Pressure:	2.3 kPa (of solvent portion at 20 °C)
Vapor Density:	Not available
Relative Liquid Density:	~ 2 g/cm^3
Solubility	Dry material is insoluble in water, paste material is soluble in water
Viscosity:	Not determined
Partition Coefficient:	Not available
VOC (wt%):	< 1.0 %

Section 10: Stability and Reactivity

REACTIVITY: None known based on available information and formula knowledge.

CHEMICAL STABILITY: The product is considered stable.

CONDITIONS TO AVOID: Strong oxidizing or reducing agents. Strong acids or bases. Exposure to high temperatures may produce hazardous decompositions products. Refer to Sections 7 and 8. Under special conditions the nickel present in this formula can react with carbon monoxide in a reducing atmosphere to form nickel carbonyl, $Ni(CO)_4$, a toxic gas. This is very unlikely.

POSSIBILITY OF HAZARDOUS REACTIONS: Under normal conditions of storage and use, no hazardous reactions will occur.

HAZARDOUS POLYMERIZATION: Hazardous polymerization does not occur.

Section 11: Toxicological Information

ACUTE TOXICITY:

PRODUCT COMPONENT INFORMATION

INGREDIENT	RESULT	SPECIES	DOSE
NICKEL	LD50 ORAL	RAT	> 9000 mg/kg
MEK	LD50 ORAL	RAT	> 2700 mg/kg

SENSITIZATION: No data available on the mixture.

MUTAGENICITY: No data available on the mixture.

CARCINOGENICITY: No data available on the mixture.

CONCLUSION / SUMMARY: Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

REPRODUCTIVE TOXICITY: No data available on the mixture.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): No data available on the mixture.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): No data available on the mixture.

ASPIRATION HAZARD: No data available on the mixture.

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE: Routes of entry anticipated: dermal.

POTENTIAL CHRONIC HEALTH EFFECTS: No data available on the mixture

General: No known significant effects or critical hazards.

Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

NUMERICAL MEASURES OF TOXICITY:

Acute Toxicity Estimates:

Route	ATE Value
Oral	> 90,000 mg/kg

Evidence for the association of nickel compound exposures and cancer risk comes mainly from workers in now obsolete nickel refining operations where very high concentrations of airborne nickel, mostly present as oxidic or sub-sulphidic species at up to 100 mg/m^3 or more, were associated with excess nasal and lung cancers. The inhalation of nickel powder has not resulted in an increased incidence of malignant lung tumors in rodents. Repeated intratracheal instillation of nickel powder produced an increased incidence of malignant lung tumors in rats. Repeated intratracheal instillation of nickel powder did not produce an increased incidence of malignant lung tumors in hamsters when administered at the maximum tolerated dose. Single intratracheal instillations of nickel powder in hamsters at doses near the LD50 produced an increased incidence of fibrosarcomas, mesotheliomas and rhabdomyosarcomas. Inhalation of nickel powder at concentrations 15 times the TLV irritated the respiratory tract in rodents.

Animal experiments indicate that soluble nickel ingestion causes adverse effects on fetal development at a threshold oral exposure of 2.2 mg/ Ni/kg/day by pregnant rats. Data are insufficient to determine if this effect occurs in humans and no regulatory agency has classified soluble forms of nickel as reproductive risks for humans. No soluble nickel is found in this product as formulated.

Section 12: Ecological Information

TOXICITY: Not available.

PERSISTENCE AND DEGRADABILITY: Not available.

BIOACCUMULATIVE POTENTIAL: Not available.

MOBILITY IN SOIL:
Soil / Water Partition Coefficient (K_{OC}): Not available.

Section 13: Disposal Considerations

DISPOSAL METHODS: The generation of waste should be avoided. Material for disposal should be placed in appropriate sealed containers to avoid potential human and environmental exposure. It is the responsibility of the generator to comply with all federal, state, and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the U.S., Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

Nickel-containing waste can be collected to recover nickel values. Should nickel recovery be implemented, follow EPA and local regulations.

Section 14: Transport Information

	DOT Classification	TDG Classification	IMDG	IATA
UN Number	UN3082		Not regulated	Not regulated
UN Proper Shipping Name	Environmentally hazardous substance, liquid, N.O.S. (carbendazim (ISO))			
Transport Hazard Class(es)	9			
Packing Group	III			
Environmental Hazards **- Marine Pollutant Substances**	No Not applicable	No Not applicable	No Not applicable	No Not applicable

- Product RQ (lbs) **- RQ Substances**	20000 (carbendazim (ISO))	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable

ADDITIONAL INFORMATION:

DOT: Package sizes shipped in quantities less than the product reportable quantity and are not subject to the Reportable Quantity (RQ) transportation requirements.

IMDG: None identified.

IATA: None identified.

SPECIAL PRECAUTIONS FOR USER: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15: Regulatory Information

U.S. FEDERAL REGULATIONS:

TSCA Listed: United States inventory (TSCA 8b): All components are listed or exempted.

HMIS Ratings: **Health**: 2 **Flammability**: 1 **Physical**: 0

SARA 311/312 Classification: Immediate (acute) health hazard. Delayed (chronic) health hazard.

SARA 313:

	Product Name	**CAS**	**%**
Supplier Notification	Nickel	7440-02-0	> 30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed. This product contains metallic nickel which is subject to the reporting requirements of SARA Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

California Prop. 65: This product contains chemicals knows to the state of California to cause cancer and birth defects or other reproductive harm. As indicated in Title 22 of the California Code of Regulations Section 12707(b)(5), for purposes of Proposition 65, nickel and nickel compounds present no significant risk of cancer by the route of ingestion.

International Regulations:

Australia inventory (AICS): Not determined.
Canada (DSL): Not determined.
China inventory (IECSC): Not determined.
Europe inventory (REACH): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Section 16: Other Information

NFPA: Health = 2, Flammability = 1, Instability / Reactivity = 0, Special =n/a

Key to Abbreviations:

ATE = Acute Toxicity Estimate
GHS = Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
UN = United Nations

Explanation and Disclaimer: Wherever such words or phrases as "hazardous," "toxic," "carcinogen," etc. appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. Any exposure can only be understood within the entire context of its occurrence, which includes such factors as the substance's characteristics as defined in the SDS, amount and duration of exposures, other chemicals present and preexisting individual differences in response to the exposure.

The data provided in this SDS is based on the information received from our raw material suppliers and other sources believed to be reliable. We are supplying you this data solely in compliance with the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200 and other Federal and state laws as described in Section 15: Regulatory Information. This SDS and the information in it are not to be used for purposes other than compliance with the Federal OSHA Hazard Communication Standard.

FARADAY STRUCTURES BELIEVES THAT THE INFORMATION IN THIS SAFETY DATA SHEET IS ACCURATE. HOWEVER, CONDUCTIVE COMPOSITES COMPANY DOES NOT IN ANY WAY WARRANT (EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) THE DATA CONTAINED OR THE PRODUCT DESCRIBED IN THIS SDS. LIABILITY, IF ANY, FOR USE OF THIS PRODUCT IS LIMITED TO THE TERMS CONTAINED IN OUR SALE TERMS AND CONDITIONS. ADDITIONALLY, WE DO NOT WARRANT THAT THE PRODUCT WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY OR PROPERTY RIGHTS OF OTHERS.

Revision History

Revision	Effective Date	Summary of Changes
0	7/19/2019	Initial version
1	5/4/2022	Branding Updates