LTS Research Laboratories, Inc.
Safety Data Sheet
Nickel Chromium Silicon

1. Product and Company Identification

Trade Name:	Nickel chromium silicon
Chemical Formula:	Ni-Cr-Si
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	37 Ramland Road
City:	Orangeburg
State:	New York
Zip Code:	10962
Country:	USA
Tel #:	855-587-2436 / 855-lts-chem
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger

Hazard Statements:
H228: Flammable solid
H317: May cause an allergic skin reaction
H351: Suspected of causing cancer

Precautionary Statements:
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/lighting/equipment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P260: Do not breathe dust/fume/gas/mist/vapours/spray
P363: Wash contaminated clothing before reuse
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):	Powder	Bulk
Health:	1	1
Flammability:	2	0
Physical:	1	0

3. Composition

Chemical Family:	Metal alloy
Additional Names:	None
Nickel (Ni):	
Percentage:	0-100 wt%
CAS #:	7440-02-0
EC #:	231-111-4
Chromium (Cr):	
Percentage:	0-100 wt%
CAS #:	7440-47-3
EC #:	231-157-5
Silicon (Si):	
Percentage:	0-100 wt%
CAS #:	7440-21-3
EC #:	231-130-8

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Seek medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

5. Firefighting Measures

Flammability:	Flammable as powder only
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO_2, sand, extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	1 mg/m^3 as Ni, long-term value
Threshold Limit Value:	0.5 mg/m^3 as Cr, long-term value
Special Equipment:	None
Respiratory Protection:	Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR 0.11mm thick.
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Silver
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	820-1907 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Acids, Halogens, Interhalogens, Ammonia, Sulfur, Oxidizing agents
Incompatible Conditions:	None
Hazardous Decomposition Products:	Metal oxide fume, Silicon oxide

11. Toxicological Information

Potential Health Effects:

Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	Chromium powder, chromium (II) and chromium (III) compounds may cause nausea, diarrhea, vomiting, skin and eye irritation and pneumoconiosis. Although less likely than Cr (VI) compounds, the NTP considers all chromium to be potentially carcinogenic. Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract.

Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	3160 mg/kg for rat by mouth
Carcinogen:	IARC-2B: Possibly carcinogenic to humans: limited evidence in human in the absence of sufficient evidence in experimental animals. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance. NTP-K: Known to be carcinogenic: sufficient evidence from human studies. EPA-K: Known human carcinogens ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals. EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer

12. Ecological Information

Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	N/A

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:	Hazardous as powder only.

Hazard Class:	4.1 Flammable solids, self-reactive substances and solid desensitized explosives
Packing Group:	III
UN Number:	UN3178
Proper Shipping Name:	Flammable solid, inorganic, n.o.s. (Nickel chromium silicon)

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Components

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

Document Last Revised:	06/30/2015