



MATERIAL SAFETY DATA SHEET

Form WI04-11A Rev. 1

Part Number(s):
100-1XX-XX, 100-2XX-XX,
100-3XX-XX, 100-4XX-XX

Product Name: In-Ovation-C
(For the self-ligation clip)

Release Date: 9-20-2006

1. Product and Company Identification

Trade Name & Synonyms In-Ovation-C	MSDS Code Number SPRON510
Chemical Name Nickel cobalt based alloy	Manufacture / Distributor GAC International Inc.
C.A.S. Number 7440-48-4	Address 355 Knickerbocker Ave. Bohemia, NY USA 11716
Grades or Minor Variant Identities NA	Information Telephone Number 1-631-419-1700
Product Use (for Canada) Orthodontic bracket	Emergency Telephone Number 1-631-419-1700

2. Composition of Ingredients

Hazardous Components Single chemical substance or mixture: Mixture Critical information: None	C.A.S. Number	Exposure Limits	%
Cobalt	7440-48-4	NA	10-50
Nickel	7440-02-0	NA	10-50
Chromium	7440-47-3	NA	1-30
Molybdenum	7439-98-7	NA	0-20
Ferum	7439-89-6	NA	0-5
Niobium	7440-03-1	NA	0-5
Titanium	7440-32-6	NA	0-5

3. Hazard Identification

Emergency Overview Effect on the human body: None. Hazardous nature: When immersed in various acid fluids, hydrogen, chlorine gas, etc will be generated. Harmful effect: In case of oxidation by annealing or immersion in acid, depending on the conditions, hexavalent chromium may be produced. Please test before use to ensure your safety. Ignition hazard rating: None					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	NA	NA	NA	NA	NA
Skin	NA	NA	NA	NA	NA
Inhalation	NA	NA	NA	NA	NA
Ingestion	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA
Medical Conditions Aggravated by Exposure NA					
Carcinogenicity (IARC, NTP) NA					
Potential Environmental Effects NA					



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4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	NA	In case this product enters the eye, see a specialist for medical treatment.	NA
Skin	In case this product comes in contact with the skin, be cautious of external injury caused by fragments such as cutting powder.	NA	NA
Inhalation	NA	In case product is inhaled, seek medical examination.	NA
Ingestion	NA	In case this product is swallowed, see a specialist for medical treatment.	NA
Other	NA	NA	NA
Note to Physicians (Treatment, Testing, and Monitoring) NA			

5. Fire and Explosion Data

Flashpoint & Method: °C / °F NA	Flammable (Explosive) Limits in Air LEL: NA UEL: NA	Autoignition Temperature NA	Other
Flame Propagation or Burning There is no need to extinguish fire because product is non flammable.	Properties Contributing to Fire Intensity NA	Flammability Classification Health- , Flammability- , Reactivity- NA	In case of fire, all materials, with exception of extra-fine line and micro powder form, are nonflammable.
Extinguishing Media Special case (exception) when micro powder and a extra-fine line form catch fire, extinguish with sand in order to prevent scattering. Fire extinguisher: It is desirable to use a general fire extinguisher, water or sand.		Extinguishing Media to Avoid NA	
Protection and Procedures for Firefighters NA			
Unusual Fire and Explosion Hazards NA			

6. Accidental Release Measures

Containment Techniques NA
Spill/Leak Clean-Up Procedures and Equipment N/A
Evacuation Procedures NA
Special Instructions NA
Reporting Requirements NA



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7. Handling and Storage

Handling Practices and Warnings

For heavy loads, be cautious of any possible damage due to dropped materials. Be cautious of sharp portions of materials, which could cause injury.

Storage Practices and Warnings

Storage: In order to avoid oxidization, avoid areas with high temperature and high humidity.

8. Exposure Control/Personal Protection

Ventilation

NA

Other Engineering Controls

NA

Routes of Entry:

Personal Protective Equipment (PPE) for Normal Use:

PPE for Emergencies:

Eye/Face

NA

NA

Skin

NA

NA

Inhalation

NA

NA

General Hygiene Considerations and Work Practices

NA

Protective Measures During Repair and Maintenance of Contaminated Equipment

NA

Other Protective Measures and Equipment

None required.

9. Physical and Chemical Characteristics

Appearance

Metallic silver-gray

Odor

None

Normal Physical State:

Liquid

Gas

Solid

_____ (Other)

Boiling Point NA °C / °F

Melting Point about 1435°C / °F

Freezing Point NA °C / °F

Specific Gravity or Density (H₂O=1)

NA

Solubility in Water

Not soluble in water

pH

NA

Vapor Pressure (mm Hg @ 20°C)

NA

Vapor Density (AIR= 1)

NA

Evaporation Rate (Butyl Acetate = 1)

N

Other

Density: 8.6 Viscosity: NA

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid)

N/A

Hazardous Products Produced During Decomposition

N/A

Hazardous Polymerization? N/A

May Occur

May Not Occur

Conditions to Avoid

°C / °F N/A

Stability? N/A

Stable

Unstable

Conditions to Avoid

°C / °F N/A

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic or Reproductive Effects, or Structure Activity Data

NA



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12. Ecological Information

Toxicity, Environmental Fate, Physical/Chemical Data, or Other Data Supporting Environmental Hazard Statements

Resolvability: No data available. Cumulative toxicity: (Accumulation of toxic inside living body): No data available. Fish toxicity (Toxic effect toward environment/living body): No data available. Resource recovery: Resoluble.

13. Disposal Considerations

Regulations

NA

Properties (Physical/Chemical) Affecting Disposal

Dispose of the material in accordance with the respective national, federal, state and local regulations.

14. Transport Information

Regulated for shipping?

Yes No

Proper Shipping Name

In-Ovation - C

Packing Group

NA

Do changes in quantity, packaging, or shipment method change product classification?

Yes No

Hazard Class

NA

Identification Number

NA

Other

NA

15. Regulatory Information

Federal Regulations

None

International Regulations

None

Other

None

16. Other Information

Supplier Number: 4/100

Supplier Release: April 06, 2006

N/A = not applicable. NA = not available, N/E = not established. N/D = not determined.