MATERIAL SAFETY DATA SHEET — 16 Sections

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Iron Platinum bimetallic nanopa		[WHMIS CI Not ass	assification] igned			
Product Use Magnetic device research						
Manufacturer's Name Richard Farrell, Chemistry			Supplier's Name UCLA			
Street Address 607 Charles E. Young Drive, Westwood		Street Address 607 Charles E. Young Drive, Westwood				
City Province CA		Los Angeles CA		Province CA		
Postal Code Emergency Telephone 90095 310-910-2510		Postal CodeEmergency Telephone90095310-910-2510				
Date MSDS PreparedMSDS Prepared ByFebruary 4 th , 2010Richard Farrell			Phone Nun 310-794			

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients (specific)	%	CAS Number	LD 50 of Ingredient (specify species and route	LC 50 of Ingredient (specify species)
Iron-Platinum alloy	3%	Not available	< 10 mg kg-1	
Hexane	95%	110-54-3	118 mg kg-1	
Oleic acid	1%	112-80-1	28700 mg kg-1	
Olelyamine	1%	112-90-3	888 mg kg-1	

SECTION 3 — HAZARDS IDENTIFICATION

Route of Entry	Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
[Emergency Overview	il				

The health hazards of this product have not been fully tested and should be used with caution.

Not all potential health effects are listed here.

[WHMIS Symbols]

Potential Health Effects:

Inhalation: Possible irritation to respiratory tract and symptoms of nausea. Headaches, drowsiness, dizziness, disorientation, sleep disturbances, loss of coordination, dilated pupils, kidney damage and liver damage.

Skin Contact: Possible irritation

Eve Contact: Possible irritation

Ingestion: Possible stomach pain and symptoms of nausea. Headache, drowsiness, dizziness, disorientation, sleep disturbances, loss of coordination, dilated pupils. Damage to kidney or liver.

SECTION 4 — FIRST AID MEASURES

Skin Contact: Wash the skin thoroughly with soap and water and seek medical advice.

Eye Contact: If eye contact occurs, rinse eye thoroughly and seek medical advice

Inhalation: If inhaled, supply fresh air or respirator and seek medical advice

Ingestion: If swallowed, seek medical attention immediately (If Victim is CONSCIOUS have the victim drink water or milk, DO NOT INDUCE VOMITING)

SAMPLE FORMAT PROVIDED BY THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA



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SECTION 5 — FIRE FIGHTING MEASURES

Flammable Yes Do		Above flash point, vapor-air mixtures are explosive within flammable limits note. Vapors can flow along surfaces to distant ignition source and flash back. Severe explosion hazard when exposed to heat			
Means of Extinction:					
Dry chemical or foam extinguisher					
Flashpoint (° C) and Method	Upper Flammable Limit (% by volume)	Lower Flammable Limit (% by volume)			
−22.5°C (-8.5°F)	7.5 %	1.2 %			
Autoignition Temperature (°C)	Explosion Data — Sensitivity to Impact	Explosion Data — Sensitivity to Static Discharge			
225°C (437°F)		yes			
Hazardous Combustion Products:					
Hexane					
[NFPA]					
In the event of a fire, wear full protec	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure				

demand or other positive pressure mode.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures

Personal Precautions: Always use proper protective equipment.

Environmental Precautions: Do not allow material to reach drains or ground water.

Cleanup of small spills: Use appropriate material to absorb liquid.

Disposal: Collect and dispose of all waste in an appropriate container.

SECTION 7 — HANDLING AND STORAGE

Handling: Follow safe laboratory practices. The product should only be used by or closely supervised by an individual trained to handle potentially hazardous materials.

Store at 4-24 °C in a tightly sealed container. Store in same type of container (glass/plastic) as shipped. Do not freeze.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits	ACGIH TLV	🗖 osha	A PEL	D Other	(specify)
	as ventilation, enclosed process) ation. Only a properly trained lab luct.				
Proper laboratory safety procedur	es should be implemented.				
Personal Protective Equipment:	Gloves 🗖 Respirator	Еуе	D Footwear	Clothing	Other
Goggles		х			
Lab coat				Х	

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid. Possible settling could occur based on storage methods.	Odor and Appearance Color: Green to dark red Odor: Not disclosed	Odour Threshold (ppm) Not disclosed
Specific Gravity	Vapour Density (air = 1)	Vapour Pressure (mmHg)
Not disclosed	Not disclosed	Not disclosed
Evaporation Rate	Boiling Point (° C)	Freezing Point (° C)
Not disclosed	Not disclosed	Not disclosed
pH	Coefficient of Water/Oil Distribution	[Solubility in Water]
Not disclosed	Not disclosed	Not soluble

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability		If no, under which conditions? Not determined
🗖 Yes 🗖	No	
Incompatibility with Other Substances	V A C	If yes, which ones?
	🗖 No	Not fully determined. Reactive or incompatible with oxidizing materials and acids
Conditions to avoid:	Not fully determine	d. Avoid heat/ flames
Thermal decomposition:	Not determined. N	Aay produce toxins.
Reactivity, and under what		
conditions?:		
Hazardous Decomposition		
Products		

SECTION 11 — TOXICOLOGICAL INFORMATION

Effects of Acute Exposure: Not disclosed	
Effects of chronic exposure: Not disclosed	
Irritancy of Product: Not disclosed	
Skin sensitization: Not disclosed	Respiratory sensitization: Not disclosed
Carcinogenicity-IARC: Not disclosed	Carcinogenicity - ACGIH : No information is available
Reproductive toxicity: Not disclosed	Teratogenicity: Not disclosed
Embrotoxicity: Not disclosed	Mutagenicity: Not disclosed
Name of synergistic products/effects	

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SECTION 12 — ECOLOGICAL INFORMATION

[Aquatic Toxicity]

No data available. See section 6 for environmental precautions

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal

Dispose of in accordance with local, state, or national regulations.

SECTION 14 — TRANSPORT INFORMATION

Special Shipping Information					
Exceptions: 49 CFR 173.4 for small quantities of hazardous materials less than 30 ml (Hexane)					
Packing Group: II					
Identification Number: UN1208			PIN		
	[DOT]	Class 3			
TDG					
[IMO]	[ICAO]				
SECTION 15 — REGULATORY INFORMATION					

[WHMIS Classification]	[OSHA]
[I'll little eldeelliedderl]	
[SERA]	[TSCA]
[]	1 1

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

SECTION 16 — OTHER INFORMATION

Disclaimer: For R&D only. Not intended for food, drug, household, agricultural or cosmetic use.

The above information is believed to be correct. UCLA shall not be held liable for any damage resulting from handling or contact with the above product.