TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Spontaneously Combustible. May spontaneously ignite on contact with air.** **Toxic compound, do not ingest or inhale. Avoid all contact with this material.** **This compound is a possible respiratory sensitizer.** **CARCINOGEN. MINIMIZE EXPOSURE.**	

Section I. Chemical Product and Company Identification

Chemical Name: **Skeletal Nickel Catalyst, Slurry in Water**
[Active Catalyst for Hydrogenation]

Catalog Number	S0487
Synonym	CI 77775
Chemical Formula	Ni
CAS Number	7440-02-0 7732-18-5(Water.)

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

In case of Emergency Call: **Chemtrec®**
(800) 424-9300 (U.S.)
(703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Skeletal Nickel Catalyst, Slurry in Water [Active Catalyst for Hydrogenation]	7440-02-0 7732-18-5(Water.)	----------	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen.	Rat LD_{50} (intraperitoneal) 250mg/kg

Section III. Hazards Identification

Acute Health Effects

Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death.
Contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Tumorigenic Effects:
Rat TDLo (Implant) 250 mg/Kg
Toxic Effects:
Tumorigenic - Carcinogenic by RTECS criteria.
Skin and Appendages - Tumors.
Tumorigenic - Tumors at site of application.
Rat TDLo (Parenteral) 40 mg/Kg/52 Weeks intermittent.
Toxic Effects:
Tumorigenic - Equivocal tumorigenic agent by RTECS criteria.
Lung, Thorax or Respiration - Tumors.
Tumorigenic Effects - Uterine tumors.
Guinea Pig TCLo (Inhalation) 15mg/$m^3$91 weeks intermittent.
Toxic Effects:
Tumorigenic - Equivocal tumorigenic agent by RTECS criteria.
Lung, Thorax or Respiration - Tumors.
Lung, Thorax or Respiration - Bronchiogenic Carcinoma.
DEVELOPMENTAL TOXICITY Reproductive Effects:
Rat TDLo (Oral) 158mg/Kg; Female multigenerations
Toxic Effects:
Effects on Embryo or Fetus - Fetotoxicity
Effects on Embryo or Fetus - Fetal Death
Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation

If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.

Continued on Next Page

Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	Spontaneously Combustible when dry.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.
Combustion Products	Metallic oxides.		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	Spontaneously Combustible when dry. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Spontaneously combustible solid. Toxic Material. Possible respiratory sensitizer. Carcinogenic Material. Stop leak if without risk. DO NOT get water inside container. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Obtain advice on use of water as spilled material may react with it. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Cover with WET earth, sand or other non-combustible material. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information	SPONTANEOUSLY COMBUSTIBLE WHEN DRY. TOXIC. POSSIBLE RESPIRATORY SENSITIZER. CARCINOGEN. Keep locked up.. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. DO NOT ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Always store away from incompatible compounds such as oxidizing agents, metals, acids.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Vapor and dust respirator. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. 
Exposure Limits	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Solid. (Black Slurry)	Solubility	Insoluble in water, ammonia. Soluble in dilute nitric acid. Slightly soluble in Hydrochloric Acid, Sulfuric Acid.
Specific Gravity	8.9 (water=1)		
Molecular Weight	58.69	Partition Coefficient	Not available.
Boiling Point	2730°C (4946°F)	Vapor Pressure	Not applicable.
Melting Point	1455°C (2651°F)	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Continued on Next Page **Emergency phone number (800) 424-9300**

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Reactive with strong oxidizing agents, metals, strong acids, sulfur, nickel nitrate, hydrazoic Acid.

Section XI. Toxicological Information

RTECS Number	QR5950000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Rat LD_{50} (intraperitoneal) 250mg/kg
Chronic Toxic Effects	**CARCINOGENIC EFFECTS** : Carcinogenic by RTECS criteria. **MUTAGENIC EFFECTS** : Not available. **TERATOGENIC EFFECTS** : Tumorigenic Effects: Rat TDLo (Implant) 250 mg/Kg Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria. Skin and Appendages - Tumors. Tumorigenic - Tumors at site of application. Rat TDLo (Parenteral) 40 mg/Kg/52 Weeks intermittent. Toxic Effects: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria. Lung, Thorax or Respiration - Tumors. Tumorigenic Effects - Uterine tumors. Guinea Pig TCLo (Inhalation) 15mg/m^3 91 weeks intermittent. Toxic Effects: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria. Lung, Thorax or Respiration - Tumors. Lung, Thorax or Respiration - Bronchiogenic Carcinoma. **DEVELOPMENTAL TOXICITY**: Reproductive Effects: Rat TDLo (Oral) 158mg/Kg; Female multigenerations Toxic Effects: Effects on Embryo or Fetus - Fetotoxicity Effects on Embryo or Fetus - Fetal Death Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Acute Toxic Effects	Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

Section XIV. Transport Information

DOT Classification	CLASS 4.2: Spontaneously combustible substance.
PIN Number	UN1378
Proper Shipping Name	Metal Catalyst, Wetted
Packing Group (PG)	II RQ: 100 (45.4kg)
DOT Pictograms	

Continued on Next Page **Emergency phone number (800) 424-9300**

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS B-6: Reactive and very flammable material. CLASS D-2A: Material causing other toxic effects (VERY TOXIC). On DSL.
EINECS Number (EEC)	231-111-4
EEC Risk Statements	R7- May cause fire. R8- Contact with combustible material may cause fire. R17- Spontaneously flammable in air. R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R40- Possible risks of irreversible effects. R42- May cause sensitization by inhalation. R45- May cause cancer.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

Version 1.0
Validated on 1/22/2008.
Printed 1/22/2008.

Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.