SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Bis(cyclopentadienyl)nickel

Product Code: NI-BC-04

CAS Number: 1271-28-9

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
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Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS02 Flame
Flam. Sol. 1 H228 Flammable solid.
GHS06 Skull and crossbones
Acute Tox. 3 H301 Toxic if swallowed.
GHS08 Health hazard
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 1A H350 May cause cancer.
GHS07
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

Signal word Danger
Hazard-determining components of labeling:
Nickelocene
Hazard statements
H228 Flammable solid.
H301 Toxic if swallowed.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H350 May cause cancer.
H335 May cause respiratory irritation.
Precautionary statements
P231 Handle under inert gas.
P235 Keep cool.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present
and easy to do. Continue rinsing.
P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 3
Fire = 2
Reactivity = 0
HMIS-ratings (scale 0 - 4)
HEALTH
Health = *2
Fire = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
3 Composition/

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS # / Substance Name
1271-28-9 Nickelocene
Identification number(s)
EC number: 215-039-0

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours
after the accident.
In case of irregular breathing or respiratory arrest provide artificial respiration.
If inhaled:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
In case of skin contact: Immediately wash with soap and water; rinse thoroughly.
In case of eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
If swallowed: Do not induce vomiting; immediately call for medical help.
Information for doctor:
Most important symptoms and effects, both acute and delayed:
No data available
Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture No data available
Advice for firefighters
Protective equipment: Mouth respiratory protective device.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Keep unprotected persons away.
Environmental precautions: No special measures required.
Methods and materials for containment and cleanup:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling: Handle under inert gas.
Precautions for safe handling
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

Keep respiratory protective device available.
Conditions for safe storage, including any incompatibilities:
Keep cool.
Store contents under inert gas.
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep receptacle tightly sealed.
Recommended storage temperature: Store at temperatures not exceeding -18 °C.
Specific end use(s) No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7.
Control parameters
Components with limit values that require monitoring at the workplace:
1271-28-9 Nickelocene

PEL Long-term value: 1 mg/m^3
as Ni

REL Long-term value: 0.015 mg/m^3
as Ni; See Pocket Guide App. A
Additional information: The lists that were valid during the creation were used as basis.
Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use
respiratory protective device that is independent of circulating air.
Protection of hands:
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the
chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and
varies from manufacturer to manufacturer.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be
observed.
Eye protection:
Tightly sealed goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

General Information
Appearance:
Form: Crystalline
Color: Dark green
Odor: Odorless
Odor threshold: No data available.
pH: N/A
Melting point/Melting range: 173-174 °C (343-345 °F)
Boiling point/Boiling range: No data available.
Flash point: N/A
Flammability (solid, gas): Product is not flammable.
Ignition temperature:
Decomposition temperature: No data available.
Autoignition: No data available.
Danger of explosion: No data available.
Explosion limits:
Lower: No data available.
Upper: No data available.
Vapor pressure: no data hPa
Density: No data available.
Relative density No data available.
Vapor density N/A
Evaporation rate N/A
Solubility in / Miscibility with
Water: Insoluble.
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Solvent content:
Organic solvents: 0.0 %
VOC content: 0.0 g/l / 0.00 lb/gl
Solids content: 100.0 %
Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No data available
Incompatible materials: No data available
Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization:
Sensitization possible through inhalation.
Sensitization possible through skin contact.
Additional toxicological information:
Carcinogenic categories
IARC (International Agency for Research on Cancer)
1271-28-9 Nickelocene 1
NTP (National Toxicology Program)
1271-28-9 Nickelocene K
OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity: No data available
Persistence and degradability No data available
Behavior in environmental systems:
Bioaccumulative potential No data available
Mobility in soil No data available
Additional ecological information: Not known to be hazardous to water.
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to enter drains, sewage systems, or other water courses system.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA UN1325
UN proper shipping name
DOT, IATA Flammable solids, organic, n.o.s.
IMDG FLAMMABLE SOLID, ORGANIC, N.O.S.
Transport hazard class(es)

DOT
Class 4.1 Flammable solids, self-reactive substances and solid desensitised explosives
Label 4.1
IMDG
Class 4
Label 4.1
IATA
dhcgy
Class 4.1 Flammable solids, self-reactive substances and solid desensitised explosives
Label 4.1
Packing group
DOT, IMDG, IATA II
Environmental hazards:
Marine pollutant: No
Special precautions for user N/A
EMS Number: F-A,S-G
Stowage Category B
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A
Transport/Additional information:
DOT
Quantity limitations On passenger aircraft/rail: 15 kg
On cargo aircraft only: 50 kg
UN "Model Regulation": UN 1325 FLAMMABLE SOLIDS, ORGANIC, N.O.S., 4.1, II

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara
Section 355 (extremely hazardous substances):
Substance is not listed.
Section 313 (Specific toxic chemical listings):
Substance is listed.
TSCA (Toxic Substances Control Act):
Substance is listed.
Proposition 65
Chemicals known to cause cancer:
Substance is listed.
Chemicals known to cause reproductive toxicity for females:
Substance is not listed.
Chemicals known to cause reproductive toxicity for males:
Substance is not listed.
Chemicals known to cause developmental toxicity:
Substance is not listed.
Carcinogenic categories
EPA (Environmental Protection Agency)
Substance is not listed.
TLV (Threshold Limit Value established by ACGIH)
Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.

GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

Signal word Danger
Hazard-determining components of labeling:
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and easy to do. Continue rinsing.
P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
National regulations:
Additional classification according to Decree on Hazardous Materials:
Carcinogenic hazardous material group I (extremely dangerous).
Carcinogenic hazardous material group II (very dangerous).
Carcinogenic hazardous material group III (dangerous).
Information about limitation of use:
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in
certain cases.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.