

NICKEL ALUMINIUM ALLOY (50% NI+50% AL)

GHS Safety Data Sheet

Version No:2.1.1.1
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

NICKEL ALUMINIUM ALLOY (50% NI+50% AL)

OTHER NAMES

"aluminum nickel alloy (50Ni/ 50Al)"

PROPER SHIPPING NAME

METAL POWDER, FLAMMABLE, N.O.S.(contains aluminium nickel alloy (50% Ni+50% Al))

PRODUCT USE

■ Reagent.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V.Ind.Estate,

248, Worli Road,

Mumbai- 400030, India

www.sdfine.com

Telephone: 91- 22 24959898/99

Fax: 91- 22 2493 7232

Email: technical@sdfine.com

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Aquatic Hazard Category 3

Flammable Solid Category 1

Skin Sensitizer Category 1

STOT - RE Category 1



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria

H228 Flammable solid.

H317 May cause an allergic skin reaction.

H372 Causes damage to organs through prolonged or repeated exposure.

H402 Harmful to aquatic life

PRECAUTIONARY STATEMENTS

Prevention

Code

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

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

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Section 2 - HAZARDS IDENTIFICATION

P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

Code	Phrase
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

Disposal

Code	Phrase
P501	Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
aluminium nickel alloy (50% Ni+50% Al)	12635-27-7	
as		
aluminium	7429-90-5	50
nickel	7440-02-0	50

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
- DO NOT attempt to remove particles attached to or embedded in eye .
- Lay victim down, on stretcher if available and pad BOTH eyes, make sure dressing does not press on the injured eye by placing thick pads under dressing, above and below the eye.
- Seek urgent medical assistance, or transport to hospital.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- Treat symptomatically.
- Copper, magnesium, aluminium, antimony, iron, manganese, nickel, zinc (and their compounds) in welding, brazing, galvanising or smelting operations all give rise to thermally produced particulates of smaller dimension than may be produced if the metals are divided mechanically. Where insufficient ventilation or respiratory protection is available these particulates may produce "metal fume fever" in workers from an acute or long term exposure.
- Onset occurs in 4-6 hours generally on the evening following exposure. Tolerance develops in workers but may be lost over the weekend. (Monday Morning Fever)
- Pulmonary function tests may indicate reduced lung volumes, small airway obstruction and decreased carbon monoxide diffusing

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- capacity but these abnormalities resolve after several months.
- Manifestation of aluminium toxicity include hypercalcaemia, anaemia, Vitamin D refractory osteodystrophy and a progressive encephalopathy (mixed dysarthria-apraxia of speech, asterixis, tremulousness, myoclonus, dementia, focal seizures). Bone pain, pathological fractures and proximal myopathy can occur.
 - Symptoms usually develop insidiously over months to years (in chronic renal failure patients) unless dietary aluminium loads are excessive.
 - Serum aluminium levels above 60 ug/ml indicate increased absorption. Potential toxicity occurs above 100 ug/ml and clinical symptoms are present when levels exceed 200 ug/ml.
 - Deferoxamine has been used to treat dialysis encephalopathy and osteomalacia. CaNa2EDTA is less effective in chelating aluminium.
 - In cases of nickel poisoning, dimercaptol delivered by deep intramuscular injection may be a suitable antidote. (Patients should not exhibit renal or hepatic dysfunction.) The use of diethyldithiocarbamate is the subject of ongoing research.
 - Irritant contact dermatoses or eczemas may respond to applications of weak antiseptic packs, antibiotic ointments (tetracycline or erythromycin) or inert pastes and ointments. Systemic antibiotics are advisable in the presence of lymphangitis or lymphadenitis.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Metal dust fires need to be smothered with sand, inert dry powders.
- DO NOT USE WATER, CO2 or FOAM.
- Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire.
 - Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.
 - DO NOT use halogenated fire extinguishing agents.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Fight fire from a safe distance, with adequate cover.

FIRE/EXPLOSION HAZARD

- DO NOT disturb burning dust. Explosion may result if dust is stirred into a cloud, by providing oxygen to a large surface of hot metal.
 - DO NOT use water or foam as generation of explosive hydrogen may result. <</>.
- Decomposition may produce toxic fumes of: metal oxides.
- Particle size, coating and dispersion in air determine aluminium reactivity.
 - Powdered aluminium must be treated as a flammable solid which can be spontaneously combustible.
 - Bulk aluminium is not combustible but at high temperatures, molten aluminium can be ignited and burn.
 - Molten aluminium may react violently if it comes into contact with water.
 - Particle size, coating and dispersion in air determine reactivity of aluminium
 - Bulk aluminium is not combustible but at high temperatures, molten aluminium can be ignited and burn.
 - Molten aluminium may react violently if it comes into contact with water. Aluminium is rapidly oxidised by water at 180 C
 - Atomised aluminium dusts are potentially explosive. Electric sparks may ignite the dust cloud even in atmospheres containing low oxygen (7%).

When aluminium oxide dust is dispersed in air, firefighters should wear protection against inhalation of dust particles, which can also contain hazardous substances from the fire absorbed on the alumina particles.

FIRE INCOMPATIBILITY

- Reacts with acids producing flammable / explosive hydrogen (H2) gas.
- None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- DO NOT touch or walk through spilled material.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- DO NOT touch or walk through spilled material.
- Control personal contact with the substance, by using protective equipment.

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Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of overexposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Glass container is suitable for laboratory quantities.
 - CARE: Packing of high density product in light weight metal or plastic packages may result in container collapse with product release.
 - Heavy gauge metal packages / Heavy gauge metal drums.
- For low viscosity materials and solids:
Drums and jerricans must be of the non-removable head type.
Where a can is to be used as an inner package, the can must have a screwed enclosure.</>.

STORAGE INCOMPATIBILITY

- Aluminium powder:
 - when finely divided is a flammable solid
 - dusts clouds form explosive mixtures with air.
 - explodes on contact with manganese dust
 - bulk dust heats spontaneously on contact with moisture.
- Nickel
 - is a strong reducing agent
 - may be pyrophoric when dry (dependent on particle size); powders or dusts may ignite spontaneously in air
 - reacts with acids, evolving flammable hydrogen gas
 - reacts violently with ammonia, ammonium nitrate, fluorine, hydrazine, hydrazoic acid, strong oxidisers, nitric acid, peroxyformic acid, potassium, potassium perchlorate, selenium, sulfur (evolves heat, incandescence), titanium and other materials.
 - WARNING: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively.
 - The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono-or poly-fluorobenzene show extreme sensitivity to heat and are explosive.
 - Avoid reaction with borohydrides or cyanoborohydrides.
 - Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
 - These trifluorides are hypergolic oxidisers. They ignites on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.
 - The state of subdivision may affect the results.

The material is described as an electropositive metal.

The activity or electromotive series of metals is a listing of the metals in decreasing order of their reactivity with hydrogen-ion sources such as water and acids.

STORAGE REQUIREMENTS

- FOR MINOR QUANTITIES:
 - Store in an indoor fireproof cabinet or in a room of noncombustible construction.
 - Provide adequate portable fire-extinguishers in or near the storage area.
- FOR PACKAGE STORAGE:
 - Store in original containers in approved flame-proof area.
 - No smoking, naked lights, heat or ignition sources.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- aluminium nickel alloy (50% Ni+50% Al):
- aluminium:
- nickel:

CAS:12635- 27- 7
CAS:7429- 90- 5
CAS:7440- 02- 0

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

MATERIAL DATA

ALUMINIUM NICKEL ALLOY (50% NI+50% AL):

ALUMINIUM:

- For aluminium oxide:

The experimental and clinical data indicate that aluminium oxide acts as an "inert" material when inhaled and seems to have little effect on the lungs nor does it produce significant organic disease or toxic effects when exposures are kept under reasonable control.

[Documentation of the Threshold Limit Values], ACGIH, Sixth Edition.

ALUMINIUM NICKEL ALLOY (50% NI+50% AL):

ALUMINIUM:

- For aluminium oxide and pyrophoric grades of aluminium:

Twenty seven year experience with aluminium oxide dust (particle size 96% 1,2 um) without adverse effects either systemically or on the lung, and at a calculated concentration equivalent to 2 mg/m3 over an 8-hour shift has lead to the current recommendation of the TLV-TWA.

The limit should also apply to aluminium pyro powders whose toxicity is reportedly greater than aluminium dusts and should be protective against lung changes.

PERSONAL PROTECTION



RESPIRATOR

•Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

■ NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
 - Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:.
- Protective gloves eg. Leather gloves or gloves with Leather facing.
 - Wear physical protective gloves, e.g. leather.
 - Wear safety footwear.

OTHER

- Overalls.
- Eyewash unit.
- Barrier cream.
- Skin cleansing cream.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

ENGINEERING CONTROLS

- For large scale or continuous use:
 - Spark-free, earthed ventilation system, venting directly to the outside and separate from usual ventilation systems
 - Provide dust collectors with explosion vents.
- Metal dusts must be collected at the source of generation as they are potentially explosive.
- Avoid ignition sources.
 - Good housekeeping practices must be maintained.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- Dust accumulation on the floor, ledges and beams can present a risk of ignition, flame propagation and secondary explosions.
- Do not use compressed air to remove settled materials from floors, beams or equipment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Light-grey powder; reacts with water.

PHYSICAL PROPERTIES

State	Divided Solid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Applicable
Boiling Range (°C)	Not Applicable	Solubility in water (g/L)	Reacts
Flash Point (°C)	Not Applicable	pH (1% solution)	Not Applicable
Decomposition Temp (°C)	Not Applicable	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	Not Available
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not Applicable

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

Acute toxicity	Not applicable
Skin corrosion/irritation	Not applicable
Serious eye damage/irritation	Not applicable
Respiratory or skin sensitization	Skin Sens. 1
Germ cell mutagenicity	Not applicable
Carcinogenicity	Not applicable
Reproductive toxicity	Not applicable
STOT- single exposure	Not applicable
STOT- repeated exposure	STOT RE 1
Aspiration hazard	Not applicable

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Accidental ingestion of the material may be damaging to the health of the individual.
 - Acute toxic responses to aluminium are confined to the more soluble forms.
 - Nickel is not well absorbed orally.
- Excretion in the urine is complete after about 4-5 days.

EYE

- There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
- Contact with the eye by metal dusts may cause mechanical abrasion or foreign body penetration of the eyeball.

SKIN

- The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models).
- Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
- Though considered non-harmful, slight irritation may result from contact because of the abrasive nature of the aluminium oxide particles.

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Thus it may cause itching and skin reaction and inflammation.

- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

- The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
- Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.
- For standard operations (eg. milling, cutting and grinding) aluminium should be treated as a nuisance dust, considered to be of a low health risk.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.
- The inhalation of small particles of metal oxide results in sudden thirst, a sweet, metallic foul taste, throat irritation, cough, dry mucous membranes, tiredness and general unwellness. Headache, nausea and vomiting, fever or chills, restlessness, sweating, diarrhoea, excessive urination and prostration may also occur.
- Regular exposure to nickel fume, as the oxide, may result in "metal fume fever" a sometimes debilitating upper respiratory tract condition resembling influenza. Symptoms include malaise, fever, weakness, nausea and may appear quickly if operations occur in closed or poorly ventilated areas.

CHRONIC HEALTH EFFECTS

- Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. This has been demonstrated via both short- and long-term experimentation. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Exposure to large doses of aluminium has been connected with the degenerative brain disease Alzheimer's Disease. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Metallic dusts generated by the industrial process give rise to a number of potential health problems. The larger particles, above 5 micron, are nose and throat irritants. Smaller particles however, may cause lung deterioration. Particles of less than 1.5 micron can be trapped in the lungs and, dependent on the nature of the particle, may give rise to further serious health consequences. Nickel causes a skin sensitisation which may produce a chronic eczema. At first an itch appears followed one week later by a red skin eruption with ulcers which discharge and become crusted. In the chronic stages, pigmented or depigmented plaques may be formed. Recovery from the skin inflammation may take weeks. Nickel dusts and some of its compounds may cause cancer; nickel workers show an increased risk of developing cancers of the lung and nasal cavity.

TOXICITY AND IRRITATION

- The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested. No significant acute toxicological data identified in literature search.

REPROTOXIN

nickel	ILO Chemicals in the electronics industry that have toxic effects on reproduction	Reduced fertility or sterility	A
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Section 12 - ECOLOGICAL INFORMATION

nickel 96 hr LC50 (55.5) mg/L Square tail mullet Fish Source:

Harmful to aquatic organisms.

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Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
aluminium	No Data Available	No Data Available	No Data Available	No Data Available
nickel	No Data Available	No Data Available	LOW	No Data Available

Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
 - Return to supplier for reuse/ recycling if possible.
- Otherwise:
- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
 - Where possible retain label warnings and MSDS and observe all notices pertaining to the product.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
- A Hierarchy of Controls seems to be common - the user should investigate:
- Reduction.
 - DO NOT allow wash water from cleaning or process equipment to enter drains.
 - It may be necessary to collect all wash water for treatment before disposal.
 - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
 - Where in doubt contact the responsible authority.
 - Recycle wherever possible.
 - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 - Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
 - Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE SOLID

HAZCHEM:

4Y

Land Transport UNDG:

Class or division:	4.1	Subsidiary risk:	None
UN No.:	3089	UN packing group:	II
Shipping Name: METAL POWDER, FLAMMABLE, N.O.S. (contains aluminium nickel alloy (50% Ni+50% Al))			

Air Transport IATA:

ICAO/IATA Class:	4.1	ICAO/IATA Subrisk:	None
UN/ID Number:	3089	Packing Group:	II
Special provisions:	A3		

Shipping name: METAL POWDER, FLAMMABLE, N.O.S. (contains aluminium nickel alloy (50% Ni+50% Al))

Maritime Transport IMDG:

IMDG Class:	4.1	IMDG Subrisk:	None
UN Number:	3089	Packing Group:	II
EMS Number:	F- G, S- G	Special provisions:	None

Limited Quantities: 1 kg
Shipping name: METAL POWDER, FLAMMABLE, N.O.S. (contains aluminium nickel alloy (50% Ni+50% Al))

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Section 15 - REGULATORY INFORMATION

REGULATIONS

aluminium nickel alloy (50% Ni+50% Al) (CAS: 12635-27-7) is found on the following regulatory lists;

"Sigma-AldrichTransport Information"

Regulations for ingredients

aluminium (CAS: 7429-90-5) is found on the following regulatory lists;

"Acros Transport Information","India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 1: List of Hazardous and Toxic Chemicals","International Numbering System for Food Additives","OECD List of High Production Volume (HPV) Chemicals","Sigma-AldrichTransport Information","WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"

nickel (CAS: 7440-02-0) is found on the following regulatory lists;

"FisherTransport Information","India Chemical Accidents Rules - Schedule 1: List of Hazardous Chemicals","India Chemical Accidents Rules - Schedule 3: Named Chemicals","India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 1: List of Hazardous and Toxic Chemicals","India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 3: List of Hazardous Chemicals for Application of Rules 5 and 7 to 15","OECD List of High Production Volume (HPV) Chemicals","Sigma-AldrichTransport Information","United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments","WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water"

Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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