

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**Product Identifier**

Perihalan Produk: **ALUMINIUM-NIKEL, SERBUK**  
 Product Description: **Aluminium-nickel, Raney-type alloy, powder**  
 Cat No. : 206230000; 206230050; 206231000; 206235000; 206230025  
 Synonyms Raney-type alloy for the preparation of Raney Nickel catalyst.  
 CAS No 12635-29-9  
 Molecular Formula Al Ni

**Relevant identified uses of the substance or mixture and uses advised against**

Recommended Use Laboratory chemicals.  
 Uses advised against No Information available

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**SECTION 2: HAZARDS IDENTIFICATION**
**Classification of the substance or mixture**

Substances/mixtures which, in contact with water, emit flammable gases	Category 2 (H261)
Respiratory Sensitization	Category 1 (H334)
Skin Sensitization	Category 1 (H317)
Carcinogenicity	Category 2 (H351)

**Label Elements**

**Signal Word**
**Danger**
**Hazard Statements**

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H261 - In contact with water releases flammable gases  
H317 - May cause an allergic skin reaction  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H351 - Suspected of causing cancer

## Precautionary Statements

### Prevention

P201 - Obtain special instructions before use  
P231 + P232 - Handle and store contents under inert gas. Protect from moisture  
P202 - Do not handle until all safety precautions have been read and understood  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P280 - Wear protective gloves  
P284 - In case of inadequate ventilation wear respiratory protection

### Response

P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish  
P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water  
P362 + P364 - Take off contaminated clothing and wash it before reuse

### Storage

P402 + P403 - Store in a dry place. Store in a closed container

### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Other Hazards

No information available

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Nickel alloy, base , Ni,Al	12635-29-9	<=100

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### General Advice

If symptoms persist, call a physician.

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

#### Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

#### Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

#### Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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## Most important symptoms and effects, both acute and delayed

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

## Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Dry sand.

#### **Extinguishing media which must not be used for safety reasons**

Water. Foam.

### Special hazards arising from the substance or mixture

Water reactive. Contact with water liberates extremely flammable gases. Thermal decomposition can lead to release of irritating gases and vapors.

### **Hazardous Combustion Products**

Thermal decomposition can lead to release of irritating gases and vapors, Nickel oxides, Fumes of aluminum or aluminum oxide, Hydrogen.

### Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

### Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

### Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

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Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

## Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from water or moist air. Keep under nitrogen. Flammables area.

## Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Component	Malaysia	ACGIH TLV	OSHA PEL
Nickel alloy, base , Ni,Al			(Vacated) TWA: 1 mg/m <sup>3</sup>

Component	European Union	The United Kingdom	Germany
Nickel alloy, base , Ni,Al			TWA: 0.03 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 8

### Exposure Controls

#### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### **Eye Protection**

Wear safety glasses with side shields (or goggles)

#### **Hand Protection**

Protective gloves

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

#### **Recommended Filter type:**

Particulates filter conforming to EN 143

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

When RPE is used a face piece Fit Test should be conducted

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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## Information on basic physical and chemical properties

Appearance	Grey	
Physical State	Powder Solid	
Odor	Odorless	
Odor Threshold	No data available	
pH	No information available	
Melting Point/Range	1350 °C / 2462 °F	
Softening Point	No data available	
Boiling Point/Range	No information available	
Flash Point	No information available	Method - No information available
Evaporation Rate	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	No data available	
Vapor Pressure	No data available	
Vapor Density	Not applicable	Solid
Specific Gravity / Density	3.460	
Bulk Density	No data available	
Water Solubility	Insoluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	Not applicable	
Decomposition Temperature	No data available	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Molecular Formula	Al Ni	
Molecular Weight	85.68	

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

Yes.

### Chemical Stability

Water reactive. Moisture sensitive.

### Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions	None under normal processing.

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## Conditions to Avoid

Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.

## Incompatible Materials

Strong oxidizing agents. Strong acids.

## Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Nickel oxides. Fumes of aluminum or aluminum oxide. Hydrogen.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

**Product Information** The toxicological properties have not been fully investigated

**(a) acute toxicity;**

Oral

Based on available data, the classification criteria are not met

Dermal

Based on available data, the classification criteria are not met

Inhalation

Based on available data, the classification criteria are not met

**(b) skin corrosion/irritation;**

Based on available data, the classification criteria are not met

**(c) serious eye damage/irritation;**

Based on available data, the classification criteria are not met

**(d) respiratory or skin sensitization;**

Respiratory

Category 1

Skin

Category 1

May cause sensitization by inhalation and skin contact

**(e) germ cell mutagenicity;**

Based on available data, the classification criteria are not met

**(f) carcinogenicity;**

Category 2

Limited evidence of a carcinogenic effect

**(g) reproductive toxicity;**

Based on available data, the classification criteria are not met

**(h) STOT-single exposure;**

Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;**

Based on available data, the classification criteria are not met

**Target Organs**

None known.

**(j) aspiration hazard;**

Not applicable  
Solid

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<b>Other Adverse Effects</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.
<b>Endocrine Disrupting Properties</b>	Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

<b><u>Ecotoxicity effects</u></b>	Do not empty into drains. Do not flush into surface water or sanitary sewer system. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.
<b><u>Persistence and degradability</u></b>	Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary
<b>Persistence</b>	Insoluble in water, May persist.
<b>Degradability</b>	Not relevant for inorganic substances.
<b>Degradation in sewage treatment plant</b>	Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
<b><u>Bioaccumulative potential</u></b>	Product has a high potential to bioconcentrate; May have some potential to bioaccumulate
<b><u>Mobility in soil</u></b>	Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility.
<b><u>Endocrine Disruptor Information</u></b>	This product does not contain any known or suspected endocrine disruptors
<b><u>Other adverse effects</u></b>	No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

<b><u>Waste treatment methods</u></b>	Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations
<b>Waste from Residues/Unused Products</b>	
<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous Keep product and empty container away from heat and sources of ignition
<b>Other Information</b>	Waste codes should be assigned by the user based on the application for which the product was used Do not flush to sewer Can be landfilled or incinerated, when in compliance with local regulations

## SECTION 14: TRANSPORT INFORMATION

<b><u>IMDG/IMO</u></b>	
<b>UN-No</b>	UN3208
<b>Hazard Class</b>	4.3

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**Packing Group** II  
**Proper Shipping Name** Metallic substance, water-reactive, n.o.s Nickel Aluminium alloy

## Road and Rail Transport

**UN-No** UN3208  
**Hazard Class** 4.3  
**Packing Group** II  
**Proper Shipping Name** Metallic substance, water-reactive, n.o.s Nickel Aluminium alloy

## IATA

**UN-No** UN3208  
**Hazard Class** 4.3  
**Packing Group** II  
**Proper Shipping Name** Metallic substance, water-reactive, n.o.s Nickel Aluminium alloy

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

**International Inventories** X = listed

### National Regulations

**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## SECTION 16: OTHER INFORMATION

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate



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BCF - Bioconcentration factor

VOC - (Volatile Organic Compound)

## Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Revision Date

22-Mar-2025

Revision Summary

Not applicable.

**In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**