



MATERIAL SAFETY DATA SHEET

Aluminum-nickel catalyst, raney-type alloy, al-ni 50/50, powder
 19871

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Aluminum-nickel catalyst, raney-type alloy, al-ni 50/50, powder

None

 Company Identification: Acros Organics N.V.
 One Reagent Lane
 Fairlawn, NJ 07410

 For information in North America, call: 800-ACROS-01
 For emergencies in the US, call CHEMTREC: 800-424-9300

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
7429-90-5	Aluminum	47%	231-072-3
7440-02-0	Nickel	53%	231-111-4
12635-29-9	Aluminum-Nickel Catalyst	<0.1	unlisted

 Hazard Symbols: XN F
 Risk Phrases: 15 40

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: Not available.

Warning! May cause allergic skin reaction. Water-Reactive. Cancer suspect agent.

Target Organs: None.

Potential Health Effects

Eye:

May cause eye irritation. Aluminum particles may cause corneal necrosis.

Skin:

May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not

been fully investigated.

Inhalation:

May cause respiratory tract irritation. Exposure may cause coughing, shortness of breath, lethargy, and an increased respiration rate.

Chronic:

Chronic inhalation of fine dusts may cause lung damage. Chronic inhalation may cause pulmonary fibrosis.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Get medical aid. Wash mouth out with water.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Flammable solid.

Extinguishing Media:

Do NOT use water directly on fire. Do NOT use carbon dioxide. Use dry chemical to fight fire.

Autoignition Temperature: Not available.

Flash Point: Not available.

NFPA Rating: Not published.

Explosion Limits, Lower: Not available.

Upper: Not available.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Remove all sources of ignition.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Ground and bond containers when transferring material. Avoid contact with skin and eyes. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood.

Storage:

Store in a cool, dry place. Store in a tightly closed container. Keep under a nitrogen blanket. Keep away from water. Flammables-area.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Aluminum	metal dust, as Al: 10 mg/m3	total: 10 mg/m3 TWA; respirable dust: 5 mg/m3 TWA; pyro powders and welding fumes: 5 mg/m3 TWA; soluble salts and alkyls: 2 mg/m3 TWA	total dust, as Al: 15 mg/m3 TWA; respirable fraction, as Al: 5 mg/m3 TWA
Nickel	metal: (1) mg/m3	as Ni: 0.015 mg/m3 TWA; NIOSH Occupational Carcinogen - see Appendix A Potential NIOSH carcinogen.	metal and insoluble compounds, as Ni: 1 mg/m3 TWA; soluble compounds, as Ni: 1 mg/m3 TWA
Aluminum-Nickel Catalyst	metal dust, as Al: 10 mg/m3 TWA (listed under ALUMINUM).	total: 10 mg/m3 TWA; respirable dust: 5 mg/m3 TWA; pyro powders and welding fumes: 5 mg/m3 TWA; soluble salts and alkyls: 2 mg/m3 TWA (listed under ALUMINUM).as Ni: 0.015 mg/m3 TWA; NIOSH Potential Occupational	total dust, as Al: 15 mg/m3 TWA; respirable fraction, as Al: 5 mg/m3 TWA (listed under ALUMINUM).metal and insoluble compounds, as Ni: 1 mg/m3 TWA; soluble compounds, as Ni: 1 mg/m3 TWA (listed under NICKEL SOLUBLE COMPOUNDS)

OSHA Vacated PELs:

Aluminum:

total dust, as Al: 15 mg/m3 TWA; respirable fraction, as Al: 5 mg/m3 TWA

Nickel:

1 mg/m3 TWA

Aluminum-Nickel Catalyst:

total dust, as Al: 15 mg/m3 TWA; respirable fraction, as Al: 5 mg/m3 TWA (listed under ALUMINUM)1 mg/m3 TWA (listed under NICKEL)as Ni:

0.1 mg/m3 TWA (listed under NICKEL SOLUBLE COMPOUNDS)

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective gloves to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Solid
Appearance: Not available.
Odor: Odorless
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: 1350 deg C
Decomposition Temperature: Not available.
Solubility: reacts slowly forming h2
Specific Gravity/Density: 3.4600g/cm3
Molecular Formula: AlNi
Molecular Weight: 85.68

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Not available.

Conditions to Avoid:

Incompatible materials, exposure to air, contact with water.

Incompatibilities with Other Materials:

Strong acids, strong oxidizing agents. The incompatibilities of aluminum are many. Refer to the NFPA Fire Protection Guide for specific information. The incompatibilities of nickel are ammonium nitrate, fluorine, hydrazine, hydrazoic acid, hydrogen + dioxane, performic acid, phosphorus, selenium, sulfur, titanium + potassium perchlorate.

Hazardous Decomposition Products:

Nickel oxide.

Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:

CAS# 7429-90-5: BD0330000

CAS# 7440-02-0: QR5950000

CAS# 12635-29-9 unlisted.

LD50/LC50:

Not available.

CAS# 7440-02-0: Skin, rabbit: LD50 = >2 gm/kg.

CAS# 12635-29-9.

Carcinogenicity:

Aluminum -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Nickel -

California: carcinogen - initial date 10/1/89

NIOSH: occupational carcinogen

NTP: Suspect carcinogen

OSHA: Possible Select carcinogen
IARC: Group 2B carcinogen
Aluminum-Nickel Catalyst -
California: carcinogen - initial date 10/1/89 (listed as NICKEL).
NIOSH: occupational carcinogen (listed as NICKEL)
NTP: Suspect carcinogen (listed as NICKEL).
OSHA: Possible select carcinogen (listed as NICKEL).
IARC: Group 2B carcinogen (listed as NICKEL).

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
Not available.
Environmental Fate:
Not available.
Physical/Chemical:
Not available.
Other:
Not available.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants:
None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None listed.
RCRA F-Series: None listed.
RCRA P-Series: None listed.
RCRA U-Series: None listed.
Not listed as a material banned from land disposal according to RCRA.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
Shipping Name: WATER REACTIVE, SOLID, N.O.S.
(ALUMINUM NICKEL)
Hazard Class: 4.3
UN Number: UN2813
Packing Group: III
IMO
Shipping Name: WATER-REACTIVE SOLID, N.O.S.
Hazard Class: 4.3
UN Number: 2813
Packing Group: III
IATA
Shipping Name: WATER-REACTIVE SOLID, N.O.S.*
Hazard Class: 4.3
UN Number: 2813
Packing Group: III
RID/ADR
Shipping Name: WATER-REACTIVE SOLID, N.O.S.
Dangerous Goods Code: 4.3(20C)
UN Number: 2813
Canadian TDG
Shipping Name: WATER-REACTIVE SUBSTANCE SOLID (ALUMINUM-NICKEL CATALYST)
Hazard Class: 4.3
UN Number: UN2813

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL

TSCA

CAS# 7429-90-5 is listed on the TSCA inventory.

CAS# 7440-02-0 is listed on the TSCA inventory.

CAS# 12635-29-9 is not listed on the TSCA inventory.

It is for research and development use only.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 7440-02-0: final RQ = 100 pounds (45.4 kg) (no reporting of relea

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7429-90-5: acute, chronic.

CAS # 7440-02-0: acute, chronic, flammable.

Section 313

This material contains Aluminum (CAS# 7429-90-5, 47%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Nickel (CAS# 7440-02-0, 53%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This chemical is not at a high enough concentration to be reportable under Section 313.

Clean Air Act:

CAS# 7440-02-0 listed as NICKEL COMPOUNDS is listed as a hazardous air pollutant (HAP).

CAS# 12635-29-9 listed as NICKEL COMPOUNDS is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

CAS# 7440-02-0 is listed as a Priority Pollutant under the Clean Water Act.

CAS# 12635-29-9 is listed as a Priority Pollutant under the Clean Water Act.

CAS# 7440-02-0 is listed as a Toxic Pollutant under the Clean Water Act.

CAS# 12635-29-9 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Aluminum can be found on the following state right to know lists:

California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Nickel can be found on the following state right to know lists:

California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Aluminum-Nickel Catalyst can be found on the following state right to know lists: California, (listed as ALUMINUM), California, (listed as NICKEL), California, (listed as NICKEL COMPOUNDS), New Jersey, (listed as ALUMINUM), New Jersey, (listed as NICKEL), Florida,

(listed as ALUMINUM), Florida, (listed as NICKEL), Pennsylvania, (listed as ALUMINUM), Pennsylvania, (listed as NICKEL), Minnesota, (listed as ALUMINUM), Minnesota, (listed as NICKEL), Minnesota, (listed as NICKEL SOLUBLE COMPOUNDS), Massachusetts, (listed as ALUMINUM), Massachusetts, (listed as NICKEL).

WARNING: This product contains Nickel, a chemical known to the state of California to cause cancer.

WARNING: This product contains Aluminum-Nickel Catalyst, listed as 'NICKEL', a chemical known to the state of California to cause cancer.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:

R 15 Contact with water liberates highly flammable gases.

R 40 Possible risks of irreversible effects.

Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7429-90-5: 0

CAS# 7440-02-0: No information available.

CAS# 12635-29-9: No information available.

Canada

CAS# 7429-90-5 is listed on Canada's DSL/NDSL List.

CAS# 7440-02-0 is listed on Canada's DSL/NDSL List.

This product does not have a WHMIS classification.

CAS# 7429-90-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7440-02-0 is not listed on Canada's Ingredient Disclosure List.

CAS# 12635-29-9 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7429-90-5: OEL-AUSTRALIA:TWA 10 mg/m³. OEL-AUSTRALIA:TWA 2 mg/m³ (salts). OEL-AUSTRALIA:TWA 5 mg/m³ (fumes). OEL-AUSTRALIA:TWA 5 mg/m³ (resp. dust). OEL-BELGIUM:TWA 10 mg/m³. OEL-BELGIUM:TWA 2 mg/m³ (salts). OEL-BELGIUM:TWA 5 mg/m³ (fumes). OEL-BELGIUM:TWA 5 mg/m³ (resp. dust). OEL-DENMARK:TWA 10 mg/m³ (resp. dust). OEL-DENMARK:TWA 2 mg/m³ (salts). OEL-DENMARK:TWA 5 mg/m³ (fumes). OEL-FINLAND:TWA 2 mg/m³ (salts). OEL-FRANCE:TWA 10 mg/m³. OEL-FRANCE:TWA 2 mg/m³ (salts)

E:TWA 5 mg/m³ (fumes). OEL-FRANCE:TWA 5 mg/m³ (resp. dust). OEL-GERMANY:TWA 6 mg/m³. OEL-HUNGARY:STEL 5 mg/m³. OEL-HUNGARY:TWA 2 mg/m³;STEL 4 mg/m³ (salts) JAN9. OEL-THE NETHERLANDS:TWA 10 mg/m³ (resp. dust). OEL-THE NETHERLANDS:TWA 2 mg/m³ (salts). OEL-RUSSIA:STEL 2 mg/m³. OEL-SWEDEN:TWA 10 mg/m³ (resp. dust). OEL-SWEDEN:TWA 2 mg/m³ (salts). OEL-SWEDEN:TWA 4 mg/m³. OEL-SWEDEN:TWA 5 mg/m³ (resp. dust). OEL-SWITZERLAND:TWA 2 mg/m³ (salts). OEL-SWITZERLAND:TWA 6 mg/m³ (fumes). OEL-SWITZERLAND:TWA 6 mg/m³ (resp. dust). OEL-UNITED KINGDOM:TWA 10 mg/m³;STEL 20 mg/m³

STEL 20 mg/m³ (resp. dust)

L IN BULGARIA, COLOMBIA, JOR

CAS# 7440-02-0: OEL-ARAB Republic of Egypt:TWA 0.1 mg/m³. OEL-AUSTRALIA:TWA 1 mg/m³. OEL-BELGIUM:TWA 1 mg/m³. OEL-BELGIUM:TWA 1 mg/m³ (insoluble compounds). OEL-CZECHOSLOVAKIA:TWA 0.05 mg/m³;STEL 0.25 mg/m³. OEL-DENMARK:TWA 0.05 mg/m³;Carcinogen. OEL-DENMARK:TWA 0.5 mg/m³ (dust). OEL-DENMARK:TWA 1 mg/m³ (insoluble compounds). OEL-FINLAND:TWA 0.1 mg/m³;Carcinogen. OEL-FINLAND:TWA 0.1 mg/m³;Skin;CAR (insoluble compounds). OEL-FRANCE:TWA 1 mg/m³. OEL-GERMANY:Carcinogen L 0.005 mg/m³;CAR (insoluble compounds). OEL-HUNGARY:STEL 0.005 mg/m³;

Carcinogen. OEL-JAPAN:TWA 1 mg/m³;Carcinogen. OEL-THE NETHERLANDS:TWA 0.1 mg/m³. OEL-THE NETHERLANDS:TWA 1 mg/m³ (insoluble compounds). OEL-THE PHILIPPINES:TWA 1 mg/m³. OEL-RUSSIA:STEL 0.05 mg/m³. OEL-SWEDEN:TWA 0.5 mg/m³. OEL-SWEDEN:TWA 0.5 mg/m³ (dust). OEL-SWITZERLAND:TWA 0.5 mg/m³ (insoluble compounds). OEL-SWITZERLAND:TWA 0.5 mg/m³;Carcinogen . OEL-THAILAND:TWA 1 mg/m³. OEL-UNITED KINGDOM:TWA 0.5 mg/m³ (insoluble compounds). OEL-UNITED KINGDOM:TWA 0.5 mg/m³ (dust). OEL-UNITED KINGDOM:TWA 1 mg/m³

TLV

CAS# 12635-29-9 (listed as aluminum): OEL-AUSTRALIA:TWA 10 mg/m³. OEL-AUSTRALIA:TWA 2 mg/m³ (salts). OEL-AUSTRALIA:TWA 5 mg/m³ (fumes). OEL-AUSTRALIA:TWA 5 mg/m³ (resp. dust). OEL-BELGIUM:TWA 10 mg/m³. OEL-BELGIUM:TWA 2 mg/m³ (salts). OEL-BELGIUM:TWA 5 mg/m³ (fumes). OEL-BELGIUM:TWA 5 mg/m³ (resp. dust). OEL-DENMARK:TWA 10 mg/m³ (resp. dust). OEL-DENMARK:TWA 2 mg/m³ (salts). OEL-DENMARK:TWA 5 mg/m³ (fumes). OEL-FINLAND:TWA 2 mg/m³ (salts). OEL-FRANCE:TWA 10 mg/m³. OEL-FRANCE:TWA 2 mg/m³ (salts). OEL-FRANCE:TWA 5 mg/m³ (fumes). OEL-FRANCE:TWA 5 mg/m³ (resp. dust). OEL-GERMANY:TWA 6 mg/m³. OEL-HUNGARY:STEL 5 mg/m³. OEL-HUNGARY:TWA 2 mg/m³;STEL 4 mg/m³ (salts) JAN9. OEL-THE NETHERLANDS:TWA 10 mg/m³ (resp. dust). OEL-THE NETHERLANDS:TWA 2 mg/m³ (salts). OEL-RUSSIA:STEL 2 mg/m³. OEL-SWEDEN:TWA 10 mg/m³ (resp. dust). OEL-SWEDEN:TWA 2 mg/m³ (salts). OEL-SWEDEN:TWA 4 mg/m³. OEL-SWEDEN:TWA 5 mg/m³ (resp. dust). OEL-SWITZERLAND:TWA 2 mg/m³ (salts). OEL-SWITZERLAND:TWA 6 mg/m³ (fumes). OEL-SWITZERLAND:TWA 6 mg/m³. OEL-SWITZERLAND:TWA 6 mg/m³ (resp. dust). OEL-UNITED KINGDOM:TWA 10 mg/m³;STEL 20 mg/m³ (resp. dust). OEL-UNITED KINGDOM:TWA 2 mg/m³ (salts)

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 10/11/1992 Revision #5 Date: 8/24/1997

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

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