

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 17.07.2012

Version 8.7

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Catalogue No. 820876
Product name Raney nickel catalyst activated for hydrogenation (with about 50% water) for synthesis
REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Chemical for synthesis
For additional information on uses please refer to the Merck Chemicals portal (www.merck-chemicals.com).

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department EQ-RS * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Pyrophoric liquid, Category 1, H250
Carcinogenicity, Category 2, H351
Specific target organ toxicity - repeated exposure, Category 1, H372
Skin sensitization, Category 1, H317
Chronic aquatic toxicity, Category 3, H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

F	Highly flammable	R17
T	Toxic	R48/23
Carc.Cat.3	Carcinogenic Category 3	R40
	Sensitising	R43
	Dangerous for the environment	R52/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Danger

Hazard statements

H250 Catches fire spontaneously if exposed to air.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P281 Use personal protective equipment as required.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Reduced labelling (≤ 125 ml)

Hazard pictograms



Signal word

Danger

Hazard statements

H250 Catches fire spontaneously if exposed to air.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H317 May cause an allergic skin reaction.
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Precautionary statements

P281 Use personal protective equipment as required.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Labelling (67/548/EEC or 1999/45/EC)



Symbol(s)	F T	Highly flammable Toxic
R-phrases(s)	17-40-43-48/23-52/53	Spontaneously flammable in air. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact. Toxic: danger of serious damage to health by prolonged exposure through inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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S-phrase(s) 15-36/37-45-61 Keep away from heat. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Reduced labelling (≤125 ml)

Symbol(s)  F Highly flammable
 T Toxic

R-phrase(s) 40-43-48/23-52/53 Limited evidence of a carcinogenic effect. May cause sensitization by skin contact. Toxic: danger of serious damage to health by prolonged exposure through inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s) 36/37-45 Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Metallic nickel skeleton catalyst, pyrophoric, under water.

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical Name (Concentration)

CAS-No. Registration number Classification

nickel powder; [particle diameter < 1 mm] (>= 25 % - < 50 %)

7440-02-0 *) Carcinogenicity, Category 2, H351
Specific target organ toxicity - repeated exposure, Category 1, H372
Skin sensitization, Category 1, H317
Chronic aquatic toxicity, Category 3, H412

aluminium (>= 5 % - <= 10 %)

7429-90-5 *) Pyrophoric solid, Category 1, H250
Substances and mixtures, which in contact with water, emit flammable gases, Category 2, H261

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Hazardous components (1999/45/EC)

Chemical Name (Concentration)

CAS-No. Classification

nickel powder; [particle diameter < 1 mm] (>= 25 % - < 50 %)

7440-02-0 Carc.Cat.3; R40
R43
T, Toxic; R48/23
R52/53

aluminium (>= 5 % - <= 10 %)

7429-90-5 F, Highly flammable; R15-17
F, Highly flammable; F; R15-17

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For the full text of the R-phrases mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Call in physician.

After skin contact: wash off with plenty of water. Remove contaminated clothing. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Special powder against metal fire, Dry powder, Water, Foam

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible material

Self-ignition possible without protective liquid.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapours, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

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Observe possible material restrictions (see sections 7 and 10).
Take up carefully. Keep moist up to disposal. Conduct recycling. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Keep away from heat and sources of ignition.

Store at +15°C to +25°C.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment
protective clothing

Respiratory protection
required when dusts/vapours/aerosols are generated.

Environmental exposure controls

Do not empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	suspension
Colour	dark grey
Odour	odourless
Odour Threshold	No information available.
pH	9 - 11 at 20 °C suspension
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Relative density	> 1,2 g/cm ³

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Water solubility	insoluble, suspension
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	Self-heating: may catch fire.
Decomposition temperature	> 100 °C
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

Spontaneously flammable in air.

10.2 Chemical stability

Keep wetted with water.

Stabilizer

water

10.3 Possibility of hazardous reactions

Violent reactions possible with:

combustible substances, halogens, Carbon monoxide, Oxygen, Strong acids and oxidizing agents

10.4 Conditions to avoid

Heating (decomposition).

Avoid exsiccation.

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Sensitisation

Mixture may cause an allergic skin reaction.

CMR effects

Carcinogenicity:

Suspected of causing cancer.

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

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Specific target organ toxicity - repeated exposure
Mixture causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
Based on available data the classification criteria are not met.

11.2 Further information

Quantitative data on the toxicity of this product are not available.
Further data:
Other dangerous properties can not be excluded.
This substance should be handled with particular care.

SECTION 12. Ecological information

12.1 Toxicity

No information available.

12.2 Persistence and degradability

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Additional ecological information

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 1378
14.2 Proper shipping name	METAL CATALYST, WETTED (CONT. NICKEL)
14.3 Class	4.2
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	D/E

Inland waterway transport (ADN)

Not relevant

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Air transport (IATA)

14.1 UN number UN 1378
14.2 Proper shipping name METAL CATALYST, WETTED (CONT. NICKEL)
14.3 Class 4.2
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
IATA (Passenger) Not permitted for transport

Sea transport (IMDG)

14.1 UN number UN 1378
14.2 Proper shipping name METAL CATALYST, WETTED (CONT. NICKEL)
14.3 Class 4.2
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-H S-M

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard 96/82/EC
Legislation Toxic
2
Quantity 1: 50 t
Quantity 2: 200 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

National legislation

Storage class 4.2

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gases.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

R15 Contact with water liberates extremely flammable gases.
R17 Spontaneously flammable in air.
R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitization by skin contact.
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Training advice

Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.