Safety Data Sheet

According to (EG) Nr. 1907/2006

Nickel catalysator deactivated
Article number: 80063/80619

Version: 6.0
actualized: 15.03.2023

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identificator

Trade name **Nickel catalysator, deactivated**
Article number: 80063/80619
Registration number: none

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.

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

Application of the substance: Research and Development

1.3 Details of the supplier of the safety data sheet

Gesellschaft für Gassysteme durch Katalyse und Elektrochemie mbH
Lilienthalstrasse 146
Building 11
34123 Kassel
Germany

Phone: +49 561 59190
Fax: +49 561 59191

E-mail: info@gaskatel.de

1.4 Emergency telephone number

Section 2 Hazards indentification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Carc. 2	H351	Suspected of causing cancer.
Carc. 1Ai	H350i	May cause cancer by inhalation.
STOT RE 1	H372	Causes damage to organs through prolonged or repeated exposure.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07 GHS08

Signal word Danger

Hazardous ingredients for labeling
Nickel oxide, Nickel

Hazard statements

H351	Suspected of causing cancer.
H350i	May cause cancer by inhalation.
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

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Additional information: -

2.3 Other hazards

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Section 3 Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients
Nickel oxide /Nickel 90-95%

Stoff	CAS	GHS	Classification	H-Sätze
Nickel oxide:	192399-1		Carc. 1Ai STOT RE 1 Skin Sens. 1 Aquatic Chronic 3	H350i H372 H317 H413
Nickel	7440-02-0		Carc. 2 STOT RE 1 Skin Sens. 1 Aquatic Chronic 3	H351 H372 H317 H412

Not dangerous ingredients
Aluminium oxide (CAS 1344-28-1) 5-10%

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation
Injury from self-protection from the danger area to the fresh air. Keep in a cool place, protect from cold. If breathing is difficult, inhale oxygen. In case of breathing, mouth-to-nose resuscitation, if not feasible mouth-to-mouth resuscitation. Maintain the airways. Ensure medical attention. After inhalation of nickel oxide smoke additional: Immediately inhale a glucocorticoid metered dose aerosol for inhalation.
After swallowing:
Rinse mouth, spit out fluid. Immediately - with conscious consciousness - drink plenty of liquid (water). Induce vomiting. Ensure medical attention.
After eye contact:
Eye Rinse under running water with wide-spread eyelids for 10 minutes under the protection of the uninjured eye. Ensure medical attention.
After skin contact:
Remove moistened clothing, taking care of self-protection. Wash affected parts of the skin thoroughly with soap under running water. In the case of subjectively perceived or objectively discernible skin lesions: Ensure medical attention.

4.2 Most important symptoms and effects, both acute and delayed
irritant effects, allergic reactions, cough, shortness of breath

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

Section 5 Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
Use fire extinguishing methods suitable to surrounding conditions.
For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture
Non-flammable.
In case of fire, the following can be released
Nickel oxide, Nickel

5.3 Advice for firefighters
Staying in the area of danger only with respiratory protection device independant of circulating air. Avoid skin contact by observing the safety distance or wear suitable protective clothing.
Additional information
Prevent fire-fighting water from entering surface water or groundwater.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Keep the area at risk. Avoid dust formation and inhalation of dusts. Avoid substance contact. In order to remove the dangerous state, the hazard area may only be entered with suitable protective measures. Wear respiratory, eye, hand and body protection (see chapter "Personal protective measures"). Pick up mechanically, avoid dust formation. Subsequently ventilate the room and clean soiled objects and floor.

6.2 Environmental precautions

Do not allow product to reach sewage system or any water course.
Slightly hazardous to water. Inform respective authorities in case of seepage into water course or sewage system. Keep contaminated washing water and dispose of appropriately.

6.3 Methods and material for containment and cleaning up

Pick up mechanically. Dispose of the material collected according to regulations.

6.4 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

7.1 Precautions for safe handling

Pay attention to cleanliness at the workplace.
At workplaces, only the amounts of substance necessary for the progress of the work may be present. Do not leave the receptacles open.
Use as close-closing systems with exhaust as possible for unloading and transfer. Avoid spilling. Fill only in labeled containers.
Avoid any contact with open handling.
Avoid handling dust when handling.
Carcinogenic and mutagenic substances only in closed equipment.
If the leakage is not to be prevented, a suction at the outlet point is required.
All rooms, equipment and appliances must be cleaned regularly. Use personal protective equipment when cleaning. Avoid dust formation.
Unavoidable dust deposits must be taken regularly.
Use Class H industrial vacuum cleaners.
Do not spill dust unnecessarily during cleaning.
The blow-off for cleaning purposes is not permissible. Alternatively: Clean damp.

7.2 Conditions for safe storage, including any incompatibilities

Keep locked up or only accessible to qualified persons.
Keep container tightly closed in a cool, dry, well-ventilated place
Containers shall be clearly and permanently marked.
If possible, keep in the original container.

7.3 Specific end use(s)

No further relevant information available.

Section 8 Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace.

Nickel oxide (1313-99-1)
Directive 2022/431/EU
Binding occupational exposure limit value of the European Union
8 hours limit value: 0,01 mg/m³ (Respirable fraction)
8 hours limit value: 0,05 mg/m³ (Inhalable fraction)
measured as nickel

Workplace exposure limit (AGW): 0,10 mg/m3 (Respirable fraction)
Workplace exposure limit (AGW): 0,05 mg/m3 (Respirable fraction) from 18.01.2025
Workplace exposure limit (AGW): 0,01 mg/m3 (Inhalable fraction) from 18.01.2025

Nickel (7440-02-0)
Workplace exposure limit (AGW): 0.006 mg / m3 (alveolar fraction)
Workplace exposure limit (AGW): 0,03 mg/m3 (Respirable fraction)

8.2 Exposure controls

Technical measures
Technical measures and the application of suitable working procedures have priority over the use of personal protective equipment. See Section 7.

Personal protective equipment

General protective and hygienic measures
Do not eat, drink or smoke while working.
Avoid inhalation of dusts.
Keep away from foodstuffs, beverages and feed.
Skin cleansing is required.
Avoid contact with clothing. Change contaminated clothing and clean thoroughly.
Replace clothing before breaks.
Separate storage facilities for road and workwear must be available if there is a risk of contamination of the workwear.
Before breaks and at the end of work, skin cleansing with soap and water is required.
After cleaning, use a greasy skin care product.

Individual protection measures

Respiratory protection

Required when dusts are generated.
Filter P3 (color code: white)

Protection of hands

Full contact

Glove material:	Nitrile
Glove thickness:	0.11 mm
Penetration time:	>480 min

Injection contact

Glove material:	Nitrile
Glove thickness:	0.11 mm
Penetration time:	>480 min

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection

Tightly sealed goggles

Body protection:
Protective work clothing

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Form:	Powder
Color	grey, dark grey
Odor:	Odorless
Odor threshold:	No information available
pH-Value:	No information available
Melting point:	~ 2000°C
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Flammability (solid, gaseous):	No information available
Ignition temperature:	Not applicable
Decomposition temperature:	Not determined
Self-igniting:	Not determined
Lower explosion limit:	No information available
Upper explosion limit:	No information available
Vapor pressure:	Not applicable
Vapor density:	No information available
Relative density:	Not determined
Bulk density:	2.24 g/cm³
Water solubility:	Insoluble
Evaporation rate:	Not applicable
Distribution coefficient (n-Octanol/Water):	Not determined
Viscosity dynamic:	Not applicable
Explosive properties:	No information available
Oxidizing properties:	No information available

Section 10 Stability and reactivity

10.1 Reactivity

Risk of dust explosion.
No dangerous reactions are expected when used as intended.

10.2 Chemical Stability

Under normal conditions the product is chemically stable.

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapors with:
Sulfurhydrogen, Sulfur, Halogens, Oxidizing agents, Perchlorates, Alcohol, Nitrates, Halogen-Halogen compounds
Exothermic reactions with:
Hydrogen peroxide, Fluorine, Iodine

10.4 Conditions to avoid
No Information available.

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
Toxicological studies with the mixture are not available.

Awareness	May cause an allergic skin reaction.
Repeated dose toxicity:	Causes damage to organs by prolonged or repeated contact exposure.
Carcinogenicity:	May cause cancer.

Section 12 Ecological information

12.1 Toxicity
Ecotoxicological studies with the mixture are not available.

12.2 Persistence and degradability
The product is a water-insoluble, chemically inert and biologically practically non-degradable solid

12.3 Bioaccumulative potential
Bioaccumulation is not expected.

12.4 Mobility in soil
The product is insoluble in water.

12.5 Results of PBT and vPvB assessment
A PBT / vPvB assessment is not applicable since it is an inorganic substance or an inorganic mixture.

12.6 Other adverse effects
Harmful to aquatic organisms, with long-term effect.

Section 13 Disposal considerations

13.1 Waste treatment methods

Keep chemicals in original containers. Do not mix with other wastes.
Uncleaned containers should be handled according to the product.
Product residues should be disposed of in accordance with the national and regional fonts.

Section 14 Transport informations

14.1 UN-Number	
ADR, ADN, IMDG, IATA	void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	void
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Class:	void
Label:	void
ADR/R-Class	void
14.3 Packing group	
ADR, ADN, IMDG, IATA	void
14.5 Environmental hazards	
Marine pollutant	void
14.6 Special precautions for use	Not applicable
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
Transport/Additional information:	
ADR	
Remarks:	Not subject to transport regulations
UN „Model Regulation“	-

Section 15 Regulatory information

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

National Regulations

Information about limitation of use:

Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning juveniles must be observed

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

Section 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:

Abk. Beschreibungen der verwendeten Abkürzungen

ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures
ADR	Accord européen relatif au transport international des marchandises dangereuses par route
BCF	BioConcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic or toxicic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals"
IMDG	International Maritime Dangerous Goods
MARPOL	Marine Pollutant
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses
vPvB	very Persistent and very Bioaccumulative