

according to Regulation (EC) No 1907/2006

## Free-Nickel ; Free-Nickel smoky

Revision date: 01.12.2021

Product code: DG-004

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

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UFI:

6600-6057-500P-5H07; HW10-90Y5-900K-DANH

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

Use of the substance/mixture

#### Nickel plating of metals

#### Uses advised against

Other uses than those specified in section 1.2 of this safety data sheet are not recommended.

### 1.3. Details of the supplier of the safety data sheet

Company name:	Dr. Galva Thomas Henning
Street:	Jungholzstraße 7A
Place:	D-76726 Germersheim
Telephone:	+49 7274 – 907 91 27
e-mail:	info@drgalva.com
Internet:	www.drgalva.com
<u>1.4. Emergency telephone</u> number:	Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service.

## **SECTION 2: Hazards identification**

# 2.1. Classification of the substance or mixture

## Regulation (EC) No. 1272/2008

Hazard categories: Respiratory or skin sensitisation: Skin Sens. 1 Hazardous to the aquatic environment: Aquatic Chronic 3 Hazard Statements: May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

### 2.2. Label elements

### Regulation (EC) No. 1272/2008

### Hazard components for labelling

nickel sulfate nickel dichloride nickel bis(sulfamidate); nickel sulfamate (anhydrate) nickel di(acetate) diammonium nickel bis(sulfate)

Signal word: Warning

**Pictograms:** 



#### **Hazard statements**

H317	
H412	

P102

May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

#### **Precautionary statements**

Keep out of reach of children.



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P103	Read carefully and follow all instructions.				
P261	Avoid breathing dust/vapours/spray.				
P280	Wear protective gloves and eye/face protection.				
P302+P352	IF ON SKIN: Wash with plenty of water.				
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.				
P501	Dispose of contents/container according to regional/national regulations. Do not discard with household waste.				

### 2.3. Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

# **SECTION 3: Composition/information on ingredients**

# 3.2. Mixtures

### Hazardous components

CAS No	Chemical name				
	EC No	Index No	REACH No		
	GHS Classification		·		
10043-35-3	boric acid			1 - < 5 %	
	233-139-2	005-007-00-2	01-2119486683-25		
	Repr. 1B; H360FD	•			
7786-81-4	nickel sulfate			< 0.1 %	
	232-104-9	028-009-00-5			
			n Irrit. 2, Resp. Sens. 1, Skin Sens. 1, 1 H360D H332 H302 H315 H334		
7718-54-9	nickel dichloride			< 0.1 %	
	231-743-0	028-011-00-6			
			n Irrit. 2, Resp. Sens. 1, Skin Sens. 1, 1 H360D H331 H301 H315 H334		
13770-89-3	nickel bis(sulfamidate); nickel su	ulfamate (anhydrate)		< 0.1 %	
	237-396-1	028-018-00-4			
	Carc. 1A, Muta. 2, Repr. 1B, Ac Acute 1, Aquatic Chronic 1; H35		kin Sens. 1, STOT RE 1, Aquatic H317 H372 H400 H410		
373-02-4	nickel di(acetate)			< 0.1 %	
	206-761-7	028-022-00-6			
			sp. Sens. 1, Skin Sens. 1, STOT RE 1332 H302 H334 H317 H372 H400		
15699-18-0	diammonium nickel bis(sulfate)		< 0.1 %		
	239-793-5				
			sp. Sens. 1, Skin Sens. 1, STOT RE 1332 H302 H334 H317 H372 H400		

Full text of H and EUH statements: see section 16.



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CAS No	EC No	Chemical name	Quantity
	Specific Conc.	Limits, M-factors and ATE	
10043-35-3	233-139-2	boric acid	1 - < 5 %
	Repr. 1B; H36	0FD: >= 5,5 - 100	
7786-81-4	232-104-9	nickel sulfate	< 0.1 %
	mg/kg Skin Ir		
7718-54-9	231-743-0	nickel dichloride	< 0.1 %
	- 681 mg/kg		
13770-89-3	237-396-1	nickel bis(sulfamidate); nickel sulfamate (anhydrate)	< 0.1 %
373-02-4	206-761-7	nickel di(acetate)	< 0.1 %
15699-18-0	239-793-5	diammonium nickel bis(sulfate)	< 0.1 %
		E = 11 mg/l (vapours); inhalation:  ATE = 1,5 mg/l (dusts or mists); oral:  ATE = 500 Sens. 1; H317: >= 0,01 - 100 STOT RE 1; H372: >= 1 - 100 STOT RE 2; H373:	

#### **Further Information**

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: boric acid The percentages of the ingredients not listed here are all below the level of consideration.

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### **General information**

In case of troubles or persistent symptoms, consult an doctor/physician. Remove persons from danger area and lie them down. Never orally infuse something to an unconscious person. No special first aid measures necessary. A vomiting, supine person must be brought into recovery position.

#### After inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician. In case of irregular breathing or respiratory arrest, perform artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Call a doctor. Change contaminated clothing. Wash contaminated clothing before reuse.



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#### After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. Protect uninjured eye.

#### After ingestion

Rinse mouth, spit liquid again. Do NOT induce vomiting. Call a physician immediately.

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

May cause an allergic skin reaction. Skin contact may cause skin irritation.

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

Treat symptomatically.

#### **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO2). Extinguishing powder. Atomized water. Foam.

### Unsuitable extinguishing media

High power water jet.

### 5.2. Special hazards arising from the substance or mixture

Upon exposure to fire, harmful gases may be emitted. Metal oxides.

#### 5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings. Wear a self-contained breathing apparatus and chemical protective clothing.

### **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

### General advice

Wear suitable protective clothing.

Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

### 6.3. Methods and material for containment and cleaning up

#### Other information

Remove material mechanically. Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

# 6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

#### Advice on safe handling

Personal precautions: refer to section 8 Provide adequate ventilation, especially in confined areas.

#### Advice on general occupational hygiene

Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.



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### Further information on handling

Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

## 7.2. Conditions for safe storage, including any incompatibilities

### Requirements for storage rooms and vessels

Store only in original container. Keep container tightly closed in a cool, well-ventilated place. Protect from heat/overheating.

Store separately from oxidizing agents.

#### Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

### 7.3. Specific end use(s)

Nickel plating of metals

### **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### **Occupational exposure limits**

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
10043-35-3	Borate compounds inorganic: boric acid	-	2		TWA (8 h)	
	Nickel, inorganic compounds (as Ni), soluble compounds	-	0.1		TWA (8 h)	

#### **Biological limit values**

CAS No	Substance	Parameter	Value	Test material	Sampling time
-	Nickel compounds	Ni	3 µg/L		After several consecutive working shifts

### 8.2. Exposure controls

#### Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

#### Skin protection

The design of personal protective equipment must be selected specifically for the job, depending on the concentration and quantity of hazardous substances. The chemical resistance of the protective agents should be clarified with their suppliers.

## **Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	green
Odour:	characteristic



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Changes in the physical state		
Melting point/freezing point:	no data available	
Boiling point or initial boiling point and boiling range:	100 °C	
Flash point:	not applicable	
Flammability Solid/liquid:	no data available	
Explosive properties not Explosive.		
Lower explosion limits:	no data available	
Upper explosion limits:	no data available	
Auto-ignition temperature:	no data available	
Self-ignition temperature		
Solid:	no data available	
Decomposition temperature:	no data available	
pH-Value (at 20 °C):	approx. 4	
Viscosity / dynamic:	no data available	
Viscosity / kinematic:	no data available	
Water solubility:	no data available	
Solubility in other solvents no data available		
Partition coefficient n-octanol/water:	no data available	
Density:	1,0-1,1 g/cm³	
Bulk density:	no data available	
9.2. Other information		

Oxidizing properties no data available

### **Further Information**

no data available

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

none known

## 10.2. Chemical stability

The product is stable under normal environmental conditions (room temperature).

### 10.3. Possibility of hazardous reactions

Protect against heat and direct solar irradiation. Protect against contaminations.

# 10.4. Conditions to avoid

Keep away from heat.

# 10.5. Incompatible materials

Oxidising substances

### 10.6. Hazardous decomposition products

Upon exposure to fire, harmful gases may be emitted. Nitrogen oxides (NOx). Hydrogen chloride (HCl). Sulfur

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oxides. Metal oxides.

### **SECTION 11: Toxicological information**

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

### Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name						
	Exposure route	Dose		Species	Source	Method	
7786-81-4	nickel sulfate						
	oral	ATE mg/kg	500				
	inhalation vapour	ATE	11 mg/l				
	inhalation aerosol	ATE	1,5 mg/l				
7718-54-9	nickel dichloride						
	oral	LD50 mg/kg	105 - 681	Rat	GESTIS		
	inhalation vapour	ATE	3 mg/l				
	inhalation aerosol	ATE	0,5 mg/l				
13770-89-3	nickel bis(sulfamidate)	nickel bis(sulfamidate); nickel sulfamate (anhydrate)					
	oral	ATE 853	8 mg/kg				
373-02-4	02-4 nickel di(acetate)						
	oral	ATE mg/kg	500				
	inhalation vapour	ATE	11 mg/l				
	inhalation aerosol	ATE	1,5 mg/l				
15699-18-0	diammonium nickel bis	(sulfate)					
	oral	ATE mg/kg	500				
	inhalation vapour	ATE	11 mg/l				
	inhalation aerosol	ATE	1,5 mg/l				

#### Irritation and corrosivity

Based on available data, the classification criteria are not met.

#### Sensitising effects

May cause an allergic skin reaction. (nickel sulfate; nickel dichloride; nickel bis(sulfamidate); nickel sulfamate (anhydrate); nickel di(acetate); diammonium nickel bis(sulfate))

#### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

The product contains boric acid. Boric acid may damage fertility. May damage the unborn child.

### STOT-single exposure

Based on available data, the classification criteria are not met.

### STOT-repeated exposure

Based on available data, the classification criteria are not met.

### Aspiration hazard

Based on available data, the classification criteria are not met.

## 11.2. Information on other hazards

## Endocrine disrupting properties

none known



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### **SECTION 12: Ecological information**

### 12.1. Toxicity

Harmful to aquatic life with long lasting effects.

## 12.2. Persistence and degradability

No data available.

# 12.3. Bioaccumulative potential

No data available.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
10043-35-3	boric acid	-1,09

## 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### 12.6. Endocrine disrupting properties

none known

### 12.7. Other adverse effects

No data available.

### **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

# **Disposal recommendations**

Disposal according to official regulations.

Consult the local waste disposal expert about waste disposal. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

#### **Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### **SECTION 14: Transport information**

#### Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Inland waterways transport (ADN)	
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Marine transport (IMDG)	
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
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Air transport (ICAO-TI/IATA-DGR)			
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.		
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.		
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.		
14.4. Packing group:	No dangerous good in sense of this transport regulation.		
14.5. Environmental hazards			
ENVIRONMENTALLY HAZARDOUS:	No		
14.6. Special precautions for user			
No special precautions known.			
14.7. Maritime transport in bulk according	to IMO instruments		
not applicable			
SECTION 15: Regulatory information			
15.1. Safety, health and environmental req	ulations/legislation specific for the substance or mixture		
Regulation (EC) No 850/2004 on pers Regulation (EC) No 649/2012 of the E of dangerous chemicals: This mix cor (annex 1). This mixture contains the following su Candidate List according to Article 59	Not subject to 2012/18/EU (SEVESO III) CCH) gents regulation): not applicable lostances that lead to the depletion of the ozone layer: not applicable sistent organic pollutants: not applicable European Parliament and of the Council concerning the export and import nations no chemicals that are subject to the export notification procedures bstances of very high concern (SVHC) which are included in the of REACH: none lostances of very high concern (SVHC) which are subject to authorisation		
National regulatory information			
Employment restrictions:	Observe employment restrictions under the Maternity Protection Directiv (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.	/e	
Water hazard class (D):	1 - slightly hazardous to water		
15.2. Chemical safety assessment			
For the following substances of this m boric acid	ixture a chemical safety assessment has been carried out:		

## **SECTION 16: Other information**

## Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,7,9,10,11,12,15,16. Version 1,00 - 18.03.2021 - first creation

Version 1,01 - 01.12.2021 - Change and revision of the SDS because of new information / recipe



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### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) BImSchV (Fed.Imm.Prot.Act): Directive on the Implementation of the Federal Immission Protection Act CAS: Chemical Abstracts Service DIN: Norm of the Deutsche Institut für Normung (German Institute for Standardization) EC: Effective Concentration EG: European Community (Europäische Gemeinschaft) EN: European Norm IATA: International Air Transport Association IBC Code: International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in **Bulk** ICAO: International Civil Aviation Organization IMDG: International Maritime Code for Dangerous Goods ISO: Norm of the International Standards Organization CLP: Classification, Labeling, Packaging IUCLID: International Uniform ChemicaL Information Database LC: Lethal concentration LD: Lethal dose log Kow: Octanol/water partition coefficient MARPOL: Maritime Pollution Convention = Convention for the Prevention of Maritime Pollution from Ships OECD: Organisation for Economic Co-operation and Development PBT: Persistent, bio-cumulative, toxic RID: Regulation Concerning the International Transport of Dangerous Goods by Rail TRGS: Technische Regeln für Gefahrstoffe UN: United Nations VOC: Volatile Organic Compounds vPvB: very persistent and very bio-cumulative VwVwS: Administrative Regulation for Water Pollutants WGK: German Water Hazard Class GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances DNEL: Derived No Effect Level PNEC: Predicted No Effect Concentration TLV: Threshold Limiting Value STOT: Specific Target Organ Toxicity Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

### Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.



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H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

#### Further Information

The information given in this safety data sheet is to describe the product's safety regulations. It is not for guaranteeing certain characteristics and is based on today's knowledge. The safety data sheet was generated upon information of pre-suppliers by:

asseso AG, Ottostraße 1, 63741, Aschaffenburg, Germany Phone: +49 (0)6021 - 1 50 86-0, Fax: +49 (0)6021 - 1 50 86-77, E-Mail: eu-sds@asseso.eu, www.asseso.eu

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)