Safety Data Sheet
NI01B - Make up for Nickel Phosphorous

Safety Data Sheet dated 23/2/2018, version 1

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

1.1. Product identifier

Mixture identification:

Trade name: NI01B - Make up for Nickel Phosphorous

Trade code: AP033-045

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

1.3. Details of the supplier of the safety data sheet

Company:

LEGOR GROUP S.p.A.
Via del Lavoro, 1
36050 Bressanvido (VI)
Italy

LEGOR GROUP S.p.A.
tel. +39 0444 467911 fax +39 0444 660677

Competent person responsible for the safety data sheet:

info@legor.com

1.4. Emergency telephone number

Centro Antiveleni
Ospedale di Niguarda "Ca Grande"
Piazza Ospedale Maggiore 3
20162 Milano
Telephone: +39 (0) 2/66 10 10 29
Telefax: +39 (0) 2/64 44 27 68
Italiano (French, English)
(24-hour-service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

- Warning, Acute Tox. 4, Harmful if swallowed.
- Warning, Skin Irrit. 2, Causes skin irritation.
- Danger, Resp. Sens. 1A, May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Warning, Skin Sens. 1B, May cause an allergic skin reaction.
- Warning, Muta. 2, Suspected of causing genetic defects.
- Danger, Carc. 1A, May cause cancer by inhalation.
- Danger, Repr. 1B, May damage fertility or the unborn child if inhaled and in contact with skin.
- Danger, STOT RE 1, Causes damage to organs through prolonged or repeated exposure.
- Warning, Aquatic Acute 1, Very toxic to aquatic life.
- Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Danger

Hazard statements:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350i May cause cancer by inhalation.
H360 May damage fertility or the unborn child if inhaled and in contact with skin.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves and eye/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water/...
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P391 Collect spillage.
P501 Dispose of contents in accordance with local regulation.

Special Provisions:

None

Contains

Nickel Sulfate Hexahydrate
boric acid

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number		Classification
>= 40% - < 50%	Nickel Sulfate Hexahydrate	Index number: CAS: EC: REACH No.:	028-009-00-5 10101-97-0 232-104-9 01-2119439361-44-0008	3.1/4/Oral Acute Tox. 4 H302 3.4.1/1A Resp. Sens. 1A H334 3.4.1/1B Resp. Sens. 1B H334 3.4.2/1B Skin Sens. 1B H317 3.5/2 Muta. 2 H341 3.6/1A Carc. 1A H350 3.7/1B Repr. 1B H360 3.9/1 STOT RE 1 H372 4.1/A1 Aquatic Acute 1 H400 4.1/C1 Aquatic Chronic 1 H410

>= 1% - < 3%	Citric acid	CAS: EC: REACH No.:	5949-29-1 201-069-1 01-2119457026-42-xxxx	3.3/2 Eye Irrit. 2 H319
>= 1% - < 3%	boric acid	Index number: CAS: EC: REACH No.:	005-007-00-2 10043-35-3 233-139-2 01-2119486683-25-xxxx	3.7/1B Repr. 1B H360FD

SVHC Substances:

>= 1% - < 3% boric acid

REACH No.: 01-2119486683-25-xxxx, Index number: 005-007-00-2, CAS: 10043-35-3, EC: 233-139-2

Substance SVHC

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Give nothing to eat or drink.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.
6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand
6.3. Methods and material for containment and cleaning up
Wash with plenty of water.
6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Exercise the greatest care when handling or opening the container.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.
7.2. Conditions for safe storage, including any incompatibilities
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Nickel Sulfate Hexahydrate - CAS: 10101-97-0
ACGIH - TWA: 0.1 mg/m3
boric acid - CAS: 10043-35-3
ACGIH - TWA(8h): 2 mg/m3 - STEL: 6 mg/m3 - Notes: (I), A4 - URT irr
DNEL Exposure Limit Values
Nickel Sulfate Hexahydrate - CAS: 10101-97-0
Worker Professional: 1.25 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Professional: 43 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 0.22 mg/m3 - Exposure: Human Inhalation - Frequency: Local chronic
Worker Professional: 0.22 mg/m3 - Exposure: Human Inhalation - Frequency: Chronic Systemic
Worker Professional: 0.002 mg/cm2 - Exposure: Human Dermal - Frequency: Local chronic

boric acid - CAS: 10043-35-3
Worker Professional: 8.3 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 392 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 4.15 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 196 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 0.98 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values
Nickel Sulfate Hexahydrate - CAS: 10101-97-0
Target: Fresh Water - Value: 15900 mg/l
Target: Marine water - Value: 38500 mg/l
Target: Terrestrial compartment - Value: 134 mg/kg

8.2. Exposure controls

Eye protection:
Use close fitting safety goggles, don't use eye lens.

Protection for skin:
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:
Use adequate protective respiratory equipment.

Thermal Hazards:
None

Environmental exposure controls:
None

Appropriate engineering controls:
None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:		--	--
Odour:		--	--
Odour threshold:	N.A.	--	--
pH:	2,5	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	N.A.	--	--
Flash point:	N.A.	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	--

Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	N.A.	--	--
Vapour density:	N.A.	--	--
Relative density:	N.A.	--	--
Solubility in water:		--	--
Solubility in oil:		--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	**Value**	**Method:**	**Notes:**
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable under normal conditions
10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
None
10.4. Conditions to avoid
Stable under normal conditions.
10.5. Incompatible materials
None in particular.
10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

Nickel Sulfate Hexahydrate - CAS: 10101-97-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 361 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 2.48 mg/l

boric acid - CAS: 10043-35-3

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: Human 15 mg - Duration: 15h - Notes: Intermittant

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Nickel Sulfate Hexahydrate - CAS: 10101-97-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 71.5 mg/l - Duration h: 96 - Notes: Clarias Batrachus

Endpoint: EC50 - Species: Shellfish = 2.58 mg/l - Duration h: 48 - Notes: Daphnia Magna

Endpoint: EC50 - Species: Algae = 0.39 mg/l - Duration h: 72 - Notes: Scenedesmus quadricauda

boric acid - CAS: 10043-35-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Shellfish 45 mg/l - Duration h: 48 - Notes: Current water

Endpoint: LC50 - Species: Daphnia magna 133000 ug/l - Duration h: 48 - Notes: Current water

Endpoint: LC50 - Species: Fish 75 mg/l - Duration h: 48 - Notes: Sea water

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia magna 6000 ug/l - Duration h: 1008 - Notes: Current water

Endpoint: NOEC - Species: Oncorhynchus mykiss 2100 ul/kg - Duration h: 2088

12.2. Persistence and degradability

None

N.A.

12.3. Bioaccumulative potential

boric acid - CAS: 10043-35-3

Bioaccumulation: Bioaccumulative - Test: N.A. -1.09 - Duration: N.A. - Notes: LogPow

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

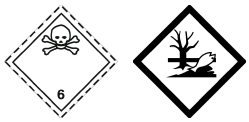
None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



14.1. UN number

ADR-UN Number:	3287
IATA-UN Number:	3287
IMDG-UN Number:	3287

14.2. UN proper shipping name

ADR-Shipping Name:	TOXIC LIQUID, INORGANIC, N.O.S. (NICKEL (II) SULPHATE HEXAHYDRATE)
IATA-Shipping Name:	TOXIC LIQUID, INORGANIC, N.O.S. (NICKEL (II) SULPHATE HEXAHYDRATE)
IMDG-Shipping Name:	TOXIC LIQUID, INORGANIC, N.O.S. (NICKEL (II) SULPHATE HEXAHYDRATE)

14.3. Transport hazard class(es)

ADR-Class:	6.1
ADR - Hazard identification number:	60
IATA-Class:	6.1
IATA-Label:	6.1
IMDG-Class:	6.1

14.4. Packing group

ADR-Packing Group:	II
IATA-Packing group:	II
IMDG-Packing group:	II

14.5. Environmental hazards

ADR-Enviromental Pollutant:	Yes
IMDG-Marine pollutant:	Marine Pollutant

14.6. Special precautions for user

ADR-Subsidiary risks:	-
ADR-S.P.:	274
ADR-Transport category (Tunnel restriction code):	2 (D/E)
IATA-Passenger Aircraft:	654
IATA-Subsidiary risks:	-
IATA-Cargo Aircraft:	662
IATA-S.P.:	A3 A4 A137
IATA-ERG:	6L
IMDG-EmS:	F-A , S-A
IMDG-Subsidiary risks:	-
IMDG-Stowage and handling:	Category B SW2
IMDG-Segregation:	-

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

SVHC Substances:

Substances in candidate list (Art. 59 Reg. 1907/2006, REACH):

boric acid

Toxic to reproduction

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: E1

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Text of phrases referred to under heading 3:

H360FD May damage fertility. May damage the unborn child.
H302 Harmful if swallowed.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2

Resp. Sens. 1A	3.4.1/1A	Respiratory Sensitisation, Category 1A
Resp. Sens. 1B	3.4.1/1B	Respiratory Sensitisation, Category 1B
Skin Sens. 1B	3.4.2/1B	Skin Sensitisation, Category 1B
Muta. 2	3.5/2	Germ cell mutagenicity, Category 2
Carc. 1A	3.6/1A	Carcinogenicity, Category 1A
Repr. 1B	3.7/1B	Reproductive toxicity, Category 1B
STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

This safety data sheet has been completely updated in compliance to Regulation 2015/830.
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	**Classification procedure**
Acute Tox. 4, H302	Calculation method
Skin Irrit. 2, H315	Calculation method
Resp. Sens. 1A, H334	Calculation method
Skin Sens. 1B, H317	Calculation method
Muta. 2, H341	Calculation method
Carc. 1A, H350i	Calculation method
Repr. 1B, H360.D	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.