

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

SAFETY DATA SHEET

QC Metal LL2 - Sporelementer/Metaller

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

1.1. Product identifier

Trade name

QC Metal LL2 - Sporelementer/Metaller

Other names / Synonyms

QC Metal LL2 - Trace elements/Metals

Product no.

VKI QC LL2

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

Relevant identified uses of the substance or mixture

Laboratory use

Use descriptors (REACH)

Sectors of use	Description
Uses advised against	None known.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Eurofins Miljø A/S

Smedeskovvej 38

8464 Galten

Denmark

E-mail

refmat@eurofins.dk

Revision

12/20/2022

SDS Version

1.0

1.4. Emergency telephone number

Contact the poison hotline: +45 82 12 12 12 (24 hour service)

See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Corr. 1B; H314, Causes severe skin burns and eye damage.

Eye Dam. 1; H318, Causes serious eye damage.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

Causes severe skin burns and eye damage. (H314)

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Safety statement(s)

General

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Prevention

Do not breathe vapour/mist. (P260)

Wear eye protection/protective gloves/protective clothing. (P280)

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

Immediately call a POISON CENTER/doctor. (P310)

Storage

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Disposal

Dispose of contents/container in accordance with local regulation

. (P501)

Hazardous substances

Nitric acid ...% [C ≤ 70 %]

Additional labelling

EUH071, Corrosive to the respiratory tract.

EUH201A, Warning! Contains lead.

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Nitric acid ...% [C ≤ 70 %]	CAS No.: 7697-37-2 EC No.: 231-714-2 REACH: Index No.: 231-714-2	5-10%	EUH071 Ox. Liq. 3, H272 Skin Corr. 1A, H314 (SCL: 20.00 %) Acute Tox. 3, H331 (ATE: 2.65 mg/l)	[1]
Silver nitrate	CAS No.: 7761-88-8 EC No.: 231-853-9 REACH: Index No.: 231-853-9	<0.1%	Ox. Sol. 2, H272 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

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Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

Burns

Not applicable.

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

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

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

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the chemical emergency services on 45 90 60 00 (24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Use sand, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and

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place in container for disposal, according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Always store in containers of the same material as the original container.

Storage temperature

Room temperature 15 to 25°C

Refrigerator, 2 to 8°C

protected from light

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Nitric acid ...% [C ≤ 70 %]

Long term exposure limit (8 hours) (mg/m³): 2,6

Long term exposure limit (8 hours) (ppm): 1

Short term exposure limit (15 minutes) (mg/m³): 2,6

Short term exposure limit (15 minutes) (ppm): 1

Annotations:

E = Substance has an EC limit.

Silver nitrate

Statutory order 1054 on exposure limits for substances and mixtures (28/06/2022)

DNEL

Nitric acid ...% [C ≤ 70 %]

Duration	Route of exposure	DNEL
Long term – Local effects - General population	Inhalation	1.3 mg/m ³
Long term – Local effects - Workers	Inhalation	2.6 mg/m ³
Short term – Local effects - General population	Inhalation	1.3 mg/m ³
Short term – Local effects - Workers	Inhalation	2.6 mg/m ³

Silver nitrate

Duration	Route of exposure	DNEL
Long term – Systemic effects - General population	Inhalation	6.3 µg/m ³
Long term – Systemic effects - Workers	Inhalation	16 µg/m ³
Long term – Systemic effects - General population	Oral	20 µg/kgbw/day

PNEC

Silver nitrate

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Route of exposure	Duration of Exposure	PNEC
Freshwater		40 ng/L
Freshwater sediment		438.13 mg/kg
Marine water		860 ng/L
Marine water sediment		438.13 mg/kg
Sewage treatment plant		25 µg/L
Soil		1.41 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

8.3. Individual protection measures, such as personal protective equipment

Generally

Only CE-marked personal protection equipment should be used.

Use only CE marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
Respiratory protection is not needed in the event of adequate ventilation			

Skin protection

Recommended	Type/Category	Standards
Dedicated work clothing should be worn	-	-



Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Nitrile	-	-	EN374-2



Eye protection

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Type	Standards
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Safety glasses with side shields.	EN166
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Colourless

Odour / Odour threshold

No data available

pH

No data available

Density (g/cm³)

No data available

Relative density

No data available

Kinematic viscosity

No data available

Particle characteristics

No data available

Phase changes

Melting point/Freezing point (°C)

No data available

Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

Boiling point (°C)

No data available

Vapour pressure

No data available

Relative vapour density

No data available

Decomposition temperature (°C)

No data available

Data on fire and explosion hazards

Flash point (°C)

No data available

Auto-Ignition (°C)

No data available

Flammability (°C)

No data available

Lower and upper explosion limit (% v/v)

No data available

Solubility

Solubility in water

Completely soluble

n-octanol/water coefficient

No data available

Solubility in fat (g/L)

No data available

9.2. Other information

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Evaporation rate (n-butylacetate = 100)

No data available

Other physical and chemical parameters

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

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.

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

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

Skin sensitisation

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

Germ cell mutagenicity

Product/substance	Nitric acid ...% [C ≤ 70 %]
Test method	OECD 471
Species	Bacteria, <i>S. typhimurium</i>
Conclusion	No adverse effect observed
Other information	

Carcinogenicity

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

Reproductive toxicity

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

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

Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

Endocrine disrupting properties

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

None known.

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Endocrine disrupting properties

None known.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 6 - Acute toxicity

HP 8 - Corrosive

Dispose of contents/container to an approved waste disposal plant.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code

06 01 05* Nitric acid and nitrous acid

Waste group

06 01 05* Nitric acid and nitrous acid

Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
ADR	UN2031	NITRIC ACID	Class: 8 Labels: 8 Classification code: C1 	II	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information.
IMDG	UN2031	NITRIC ACID	Class: 8 Labels: 8 Classification code:	II	No	Limited quantities: 1 L EmS: F-A S-B*

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14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
		C1 			See below for additional information.
IATA UN2031	NITRIC ACID	Class: 8 Labels: 8+5.1 Classification code: CO1  	II	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

Although this product is environmentally hazardous, the environmentally hazardous substance mark has been omitted as the product is supplied in packaging with a maximum quantity of 5 L / 5 kg.

ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

Not applicable.

Regulation on explosives precursors

Nitric acid ...% [C ≤ 70 %] (Annex I)

Additional information

Code number (1993): 5-4

Sources

The Danish Working Environment Authority's executive order no. 239 of 6 April 2005 on young people's work.

Based on Council Directive 94/33 / EC of 22 June 1994 on the protection of young people at work.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

Council Regulation (EC) No 2019/1148 on explosives precursors.

Arbejdstilsynets bekendtgørelse nr. 301 af 13. maj 1993 om fastsættelse af kodenumre med senere ændringer.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the

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Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

EUH071, Corrosive to the respiratory tract.
H272, May intensify fire; oxidiser.
H314, Causes severe skin burns and eye damage.
H331, Toxic if inhaled.
H400, Very toxic to aquatic life.
H410, Very toxic to aquatic life with long lasting effects.

The full text of identified uses as mentioned in section 1

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Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).

The safety data sheet is validated by

FYE3

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Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: DK-en