

VALAGRO SDS

Date: December 16, 2021 version number: 1.2

Product: Brexil Mix

Code: 11433

Print Date: December 16, 2021

## SAFETY DATA SHEET

### BREXIL Mix

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

##### 1.1. Product identifier

Product form : Mixture  
Product name : Brexil Mix  
Product code : 11433

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

###### 1.2.1. Relevant identified uses

Use of the substance/mixture : Fertilizer

###### 1.2.2. Uses advised against

No additional information available

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

Produced and packed by:  
VALAGRO Spa  
Via Cagliari, 1 Zona Industriale  
66041 Atessa (CH) ITALY  
Tel. (+39) 08728811 Fax (+39) 0872881382  
www.valagro.com

Distributed and guaranteed by:  
Campbells Fertilisers Australasia  
18 Raymond Road, Laverton North, Victoria, 3026  
Phone: (03) 9931 2211  
Fax: (03) 9931 2201  
www.campbellsfert.com.au

Competent person responsible for the safety data sheet:  
regulatory@valagro.com

##### 1.4. Emergency telephone number

Poison Information Centre - Telephone: 131126 (Australia wide – 24HRS)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

Classification according to the Hazardous Substances (Classification) Notice 2020, New Zealand:

###### HSNO Classification:

6.4A - Substances that are irritating to the eye  
9.1B - Substances that are ecotoxic in the aquatic environment

###### Hazard statement codes:

H319 - Causes serious eye irritation  
H411 - Toxic to aquatic life with long lasting effects

###### Precautionary statement codes – Prevention:

P103 - Read label before use  
P264 - Wash exposed areas thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective eye/face protection

###### Precautionary statement codes – Response:

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P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 If eye irritation persists: Get medical advice/attention.  
 P391 - Collect spillage

**Precautionary statement codes – Disposal:**

P501 - Dispose of contents/container to comply with applicable local, national and international regulation

**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



Signal word (CLP) : Warning

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

**3.1. Substance**

Not applicable

**3.2. Mixture**

Name	Cas No.	%	Approval Status (NZIoC)
Zinc sulphate	7733-02-0	12.5 - 15	HSNO Approval Code HSR006560 Restrictions / Exclusions: None
Iron (II) sulfate	7720-78-7	1 - 3	HSNO Approval Code HSR003420
Manganese(II) sulfate	7785-87-7	1 - 3	HSNO Approval Code HSR003945 Restrictions / Exclusions: None
copper sulphate	7758-98-7	1 - 3	HSNO Approval Code HSR003117 Restrictions / Exclusions: None

Other ingredients not subject to the provisions of the Hazardous Substances (identification) Regulations 2001, make up the product concentration to 100%

Full text of H-statements: see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical advice.

First-aid measures after skin contact : Remove contaminated clothing immediately and dispose of safely. Wash skin thoroughly with mild soap and water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

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- First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Give water to drink if victim completely conscious/alert. Do not induce vomiting without medical advice. Immediately call a POISON CENTER or doctor/ physician.
- Other information : For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

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

- Symptoms/injuries after inhalation : Inhalation may cause irritation, cough, shortness of breath.
- Symptoms/injuries after skin contact : Frequent or prolonged contact with skin may cause dermal irritation. Symptoms include redness, itching, and burning of the skin.
- Symptoms/injuries after eye contact : Causes serious eye irritation. Pain. redness, itching, tears.
- Symptoms/injuries after ingestion : May cause gastric irritation. Vomiting. stomach pain.

**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 : Carbon dioxide (CO<sub>2</sub>). Water spray. Foam. Powder.

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

- Fire hazard : Do not breathe fumes.
- Explosion hazard : Explosive dust-air mixtures may form.
- Hazardous decomposition products in case of fire : Sulfur oxides. carbon oxides (CO and CO<sub>2</sub>). Nitrogen oxides. Metal oxides.

**5.3. Advice for firefighters**

- Precautionary measures fire : Evacuate the personnel away from the fumes.
- Firefighting instructions : Move undamaged containers from immediate hazard area if it can be done safely.
- Protective equipment for firefighters : Extra personal protection: complete protective clothing including self-contained breathing apparatus. EN 469.
- Other information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Do not allow run-off from fire fighting to enter drains or water courses.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

- Protective equipment : Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Alert emergency personnel. Eliminate all ignition sources if safe to do so. Provide adequate ventilation.
- Measures in case of dust release : Dust production: dust mask with filter type P2.

**6.1.2. For emergency responders**

- Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Dust production: dust mask with filter type P2.
- Emergency procedures : Evacuate unnecessary personnel. Avoid generation of dust. Dust may form explosive mixture in air. Eliminate all ignition sources if safe to do so.

**6.2. Environmental precautions**

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

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

- For containment : Stop leak if safe to do so.
- Methods for cleaning up : Ventilate affected area. Wear personal protection equipment. Minimize generation of dust. Wash with plenty of soap and water. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Consult the appropriate authorities about waste disposal.
- Other information : Do not allow uncontrolled discharge of product into the environment.

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**6.4. Reference to other sections**

For disposal of residues refer to section 13 : Disposal considerations. For further information refer to section 8: "Exposure controls/personal protection".

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust, fume, mist, vapours. Minimize generation of dust. Keep away from sources of ignition - No smoking. Do not re-use empty containers without proper cleaning or reconditioning.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

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

- Storage conditions : Keep in original containers. Store tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight. Use care during processing to minimize generation of dust. Explosive dust-air mixtures may form.
- Incompatible products : Strong bases. Strong acids. Oxidising agents. reducing agents.
- Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition.
- Prohibitions on mixed storage : Keep away from food, drink and animal feeding stuffs.

**7.3. Specific end use(s)**

No additional information available

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

**8.1. Control parameters**

**New Zealand Workplace Exposure Standard:**

No value assigned for any of the ingredients by the New Zealand Department of Labour (Health & Safety).

**Zinc sulphate (7733-02-0) (EU parameters)**

**DNEL/DMEL (Workers)**

Long-term - systemic effects, dermal	500 mg/kg bodyweight/day
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Long-term - systemic effects, inhalation	1 mg/m <sup>3</sup>
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**DNEL/DMEL (General population)**

Long-term - systemic effects, oral	50 mg/kg bodyweight/day
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Long-term - systemic effects, inhalation	1,3 mg/m <sup>3</sup>
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Long-term - systemic effects, dermal	500 mg/kg bodyweight/day
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**PNEC (Water)**

PNEC aqua (freshwater)	0,0206 mg/l
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PNEC aqua (marine water)	0,0061 mg/l
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**PNEC (Sediment)**

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<b>Zinc sulphate (7733-02-0) (EU parameters)</b>	
PNEC sediment (freshwater)	235,6 mg/kg dwt
PNEC sediment (marine water)	113 mg/kg dwt
PNEC (Soil)	
PNEC soil	106,8 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	0,052 mg/l

<b>copper sulphate (7758-98-7) (EU parameters)</b>	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	137 mg/kg bodyweight/day
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.041 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.0078 mg/l
PNEC aqua (marine water)	0.0052 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	87 mg/kg dwt
PNEC sediment (marine water)	676 mg/kg dwt
PNEC (Soil)	
PNEC soil	65 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	0.23 mg/l

<b>Manganese(II) sulfate (7785-87-7) (EU parameters)</b>	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0.00414 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.2 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	0.043 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	0.0021 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.0128 mg/l
PNEC aqua (marine water)	0.0004 mg/l
PNEC aqua (intermittent, freshwater)	0.03 mg/l
PNEC (Sediment)	

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Manganese(II) sulfate (7785-87-7) (EU parameters)	
PNEC sediment (freshwater)	0.0114 mg/kg dwt
PNEC sediment (marine water)	0.00114 mg/kg dwt
PNEC (Soil)	
PNEC soil	25.1 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	56 mg/l

Iron (II) sulfate (7720-78-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1.6 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5.5 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.4 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	0.8 mg/kg bodyweight/day
PNEC (Sediment)	
PNEC sediment (freshwater)	49.5 mg/kg dwt referred to Iron concentration
PNEC (Soil)	
PNEC soil	55 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	500 mg/l referred to Iron concentration

## 8.2. Exposure controls

**Appropriate engineering controls:** Provide adequate ventilation.

**Personal protective equipment:** Safety glasses. Gloves. Protective clothing.

**Hand protection:** Chemical resistant PVC gloves (to European standard EN 374 or equivalent). Breakthrough time : > 480 min. Thickness of glove material: > 0,13 mm

**Eye protection:** Use eye protection according to EN 166 or equivalent, designed to protect dusts. Tightly fitting safety goggles

**Skin and body protection:** Use chemically protective clothing. EN 14605 or equivalent.

**Respiratory protection:** Dust production: dust mask with filter type P2. EN 149 or equivalent.



**Environmental exposure controls:** Do not allow into drains or water courses. Do not allow to enter into soil/subsoil.

## SECTION 9: Physical and chemical properties

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

Physical state : Solid

Appearance : Granular solid.

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Colour	: brown.
Odour	: coffee.
Odour threshold	: No data available
pH	: No data available
pH 1% water solution	: 4.6 (t = 20°C)
Relative evaporation rate (butyl acetate=1)	: not applicable, solid
Melting point	: No data available
Freezing point	: not applicable, solid
Boiling point	: not applicable, solid
Flash point	: not applicable, solid
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: not applicable, solid
Relative vapour density at 20 °C	: not applicable, solid
Relative density	: No data available
Density	: 0.6 - 0.7 kg/l @ 20 °C
Solubility	: Water: 300 g/l @ 20 °C
Log Pow	: No data available
Viscosity, kinematic	: not applicable, solid
Viscosity, dynamic	: not applicable, solid
Explosive properties	: Not expected to be explosive as none of the components is classified as explosive.
Oxidising properties	: None of the components are classified for oxidizing properties.
Explosive limits	: No data available

## 9.2. Other information

Specific conductivity : 60000 µS/m @ 18 °C

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under normal conditions. No polymerization. May react with alkalis such as lime to generate ammonia vapours.

### 10.4. Conditions to avoid

Overheating. Avoid generation of dust. Accumulation of airborne dusts may present an explosion hazard in the presence of an ignition source.

### 10.5. Incompatible materials

Oxidising agents. reducing agents. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

During a fire: Sulfur oxides. Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Metal oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### Copper sulphate (7758-98-7)

LD50 dermal rabbit	> 2000 mg/kg
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#### Zinc sulphate (7733-02-0)

LD50 dermal rat	> 2000 mg/kg Van Huygevoort (1999a)
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#### Manganese(II) sulfate (7785-87-7)

LC50 inhalation rat	> 4.98 mg/l Griffiths DR (2010)
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#### Iron (II) sulfate (7720-78-7)

LD50 dermal	> 2000 mg/kg
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation (Eye Irrit. Cat.2 in a study according to OECD TG 405)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity



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LC50 fish 1	35.8 mg/l Zebra fish 96h (OECD 203)
EC50 Daphnia 1	4.15 mg/l Daphnia Magna 48h (OECD 202)
ErC50 (algae)	2.12 mg/l Green Algae 72h (OECD 201)
LOEC (acute)	2.63 mg/l Daphnia Magna 48h (OECD 202)
NOEC (acute)	1 mg/l Daphnia Magna 48h (OECD 202)

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

Bioaccumulative potential	Product does not contain any bioaccumulative substance.
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**12.4. Mobility in soil**

Mobility in soil	In general, the mobility in the soil of the microelements in the mixture is influenced by several factors such as pH, CO <sub>2</sub> concentration, redox conditions, and availability of organic and inorganic complexing agents.
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**12.5. Results of PBT and vPvB assessment**

Results of PBT assessment	The components in this formulation do not meet the criteria for classification as PBT or vPvB.
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**12.6. Other adverse effects**

Other adverse effects : None known.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste treatment methods : Reuse or recycle following decontamination. External recovery and recycling of waste should comply with applicable local and/or national regulations.

**SECTION 14: Transport information**

In accordance with IATA / IMDG / NZS 5433:2012 Transport of Dangerous Goods on Land.

**14.1. UN number**

UN-No. (NZS5433) : 3077  
 UN-No. (IMDG) : 3077  
 UN-No. (IATA) : 3077

**14.2. UN proper shipping name**

Proper Shipping Name (NZS5433) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s.  
 Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, (E)  
 Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

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Transport document description (IATA) : UN 3077 Environmentally hazardous substance, solid, n.o.s. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, ENVIRONMENTALLY HAZARDOUS

**14.3. Transport hazard class(es)**

**NZS5433**

Transport hazard class(es) (ADR) : 9

Danger labels (ADR) : 9



**IMDG**

Transport hazard class(es) (IMDG) : 9

Danger labels (IMDG) : 9



**IATA**

Transport hazard class(es) (IATA) : 9

Hazard labels (IATA) : 9



**14.4. Packing group**

Packing group (NZS5433) : III

Packing group (IMDG) : III

Packing group (IATA) : III

**14.5. Environmental hazards**

Dangerous for the environment : Yes

Marine pollutant : Yes

Hazchem Code : 2Z

Other information : No supplementary information available

**SECTION 15: Regulatory information**

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

**15.1.1. EU-Regulations**

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

**15.1.2. National regulations**

**New Zealand**

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Classification : Classified as not hazardous according to Hazardous Substances (Classification) Notice 2020, New Zealand

**SECTION 16: Other information**

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Abbreviations and acronyms:

SDS	Safety Data Sheet
CAS	Chemical Abstracts Service
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rai
PNEC	Predicted No-Effect Concentration
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

Other information : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H373	May cause 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	
H411	Toxic to aquatic life with long lasting effects	
Eye Irrit. 2	H319	On basis of test data
Aquatic Chronic 2	H411	Calculation method