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

1.1 Product identifier
E-NOX Care (INOX-Care, Stainless Care)

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

1.3 Details of the supplier of the safety data sheet
Supplier
Revolution Materials

Street : 7/37-39 Little Boundary Rd

Postal code/City : Laverton North VIC 3026

Telephone : +61 3 9029 3469

Telefax :

Information contact : info@bio-circle.com.au

1.4 Emergency telephone number
+61 0428 400 983 during normal office hours
(Monday to Thursday from 8 am to 4 pm and Friday from 8 am to 3 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [CLP]
Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.
Asp. Tox. 1 ; H304 - Aspiration hazard : Category 1 ; May be fatal if swallowed and enters airways.

2.2 Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Health hazard (GHS08) · Exclamation mark (GHS07)

Signal word
Danger

Hazard components for labelling
Hydrocarbons, C13-C16, n-alkanes, isoalkanes < 0,03% aromatics ; CAS No. : 1174522-45-2
Hydrocarbons, C12-C15, n-alkanes, isoalkanes < 2% aromatics

Hazard statements

H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/....
P337+P313	If eye irritation persists: Get medical advice/attention.
P331	Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

2-(2-BUTOXYETHOXY)ETHANOL ; REACH No. : 01-2119475104-44-XXXX ; EC No. : 203-961-6; CAS No. : 112-34-5

Weight fraction : ≥ 25 - < 50 %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319
Substance with a common (EC) occupational exposure limit value.

Hydrocarbons, C12-C15, n-alkanes, isoalkanes < 2% aromatics ; REACH No. : 01-2119453414-43-XXXX ; EC No. : 920-107-4

Weight fraction : ≥ 25 - < 50 %

Classification 1272/2008 [CLP] : Asp. Tox. 1 ; H304

Hydrocarbons, C13-C16, n-alkanes, isoalkanes < 0,03% aromatics ; REACH No. : 01-2119826592-36-XXXX ; EC No. : 934-954-2; CAS No. : 1174522-45-2

Weight fraction : ≥ 25 - < 50 %

Classification 1272/2008 [CLP] : Asp. Tox. 1 ; H304

ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; REACH No. : (Polymer) ; EC No. : 931-138-8; CAS No. : 69011-36-5

Weight fraction : ≥ 5 - < 10 %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319 Aquatic Chronic 3 ; H412

Additional information

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person or a person with cramps.

Following inhalation

In case of respiratory tract irritation, consult a physician.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Rub greasy ointment into the skin.

After eye contact

Protect uninjured eye. In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

Do NOT induce vomiting. Let 1 glass of water be drunken in little sips (dilution effect). Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

May be fatal if swallowed and enters airways. Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Extinguishing powder Carbon dioxide (CO2) Sand Nitrogen Extinguishing blanket

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide , Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

5.4 Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. 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

Special danger of slipping by leaking/spilling product.

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

Clear spills immediately. Wipe up with absorbent material (eg. cloth, fleece). Wash with plenty of water. Treat the recovered material as prescribed in the section on waste disposal.

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

Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities

Keep/Store only in original container. Protect against : Frost .

Hints on joint storage

Storage class (TRGS 510) : 10

Further information on storage conditions

P405 - Store locked up.

7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5

Limit value type (country of origin) :	TRGS 900 (D)
Limit value :	10 ppm / 67 mg/m^3
Peak limitation :	1,5(I)
Remark :	Y

Version : 23.06.2022
Limit value type (country of origin) : STEL (EC)
Limit value : 15 ppm / 101,2 mg/m³
Version : 20.06.2019
Limit value type (country of origin) : TWA (EC)
Limit value : 10 ppm / 67,5 mg/m³
Version : 20.06.2019

DNEL-/PNEC-values

DNEL/DMEL

2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5
Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 67,5 mg/m³
Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 101,2 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 67,5 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 20 mg/kg

ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 294 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 2080 mg/kg

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Wear suitable safety goggles in case of splash.

Suitable eye protection
EN 166.

Skin protection

Hand protection

Suitable gloves type : EN 374.
Suitable material : NBR (Nitrile rubber)

Breakthrough time : 480 min.

Thickness of the glove material : 0.4 mm

Remark : 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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values

Suitable respiratory protection apparatus

Combination filtering device
Type : A

Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

General information

Do not put any product-impregnated cleaning rags into your trouser pockets. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. P362+P364 - Take off contaminated clothing and wash it before reuse. P264 - Wash hands thoroughly after handling.

8.3 Additional information

No tests have been performed. Selection made for preparations according to the best available knowledge and information on ingredients. In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : clear

Odour

characteristic

Safety characteristics

Flash point :		approx.	130	°C	DIN EN ISO 13736
Auto-ignition temperature :			not relevant		
Flammability :			non-flammable		
Lower explosion limit :			not relevant		
Upper explosion limit :			not relevant		
Vapour pressure :	(50 °C)	<	0,1	hPa	
Density :	(20 °C)	approx.	0,86	g/cm³	
Water solubility :	(20 °C)		partially soluble		
pH :	(20 °C)		not applicable		
Cinematic viscosity :	(40 °C)	<	20,5	mm²/s	
Relative vapour density :	(20 °C)		not determined		
Maximum VOC content (EC) :			0	Weight-%	
Maximum VOC content (Switzerland) :			33	Weight-%	
Taxable VOC content (Switzerland) :			33	Weight-%	

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability
The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions
No known hazardous reactions.

10.4 Conditions to avoid
No information available.

10.5 Incompatible materials
No information available.

10.6 Hazardous decomposition products
No known hazardous decomposition products.
Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Acute oral toxicity

Parameter :	ATEmix
Exposure route :	Oral
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Oral
Species :	Mouse
Effective dose :	5530 mg/kg
Method :	OECD 401
Parameter :	LD50 (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 5000 mg/kg
Method :	OECD 423

Acute dermal toxicity

Parameter :	ATEmix
Exposure route :	Dermal
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 5000 mg/kg
Method :	OECD 402
Parameter :	LD50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	2764 mg/kg
Method :	OECD 402

Acute inhalation toxicity

Parameter :	ATEmix
Exposure route :	Inhalation
Effective dose :	> 20 mg/l

Corrosion

Skin corrosion/irritation

No further relevant information available.

Serious eye damage/eye irritation

No further relevant information available.

Respiratory or skin sensitisation

Skin sensitisation

No further relevant information available.

Sensitisation to the respiratory tract

No further relevant information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No further relevant information available.

Germ cell mutagenicity

No further relevant information available.

Reproductive toxicity

No further relevant information available.

STOT-single exposure

No further relevant information available.

STOT-repeated exposure

No further relevant information available.

Aspiration hazard

No further relevant information available.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Other adverse effects

Has degreasing effect on the skin. Frequently or prolonged contact with skin may cause dermal irritation.

Additional information

Preparation not tested. The statement is derived from the properties of the single components.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter :	LC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Lepomis macrochirus (Bluegill)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1300 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Species :	Cyprinus carpio (Common Carp)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1 - 10 mg/l
Exposure time :	96 h
Method :	OECD 203

Chronic (long-term) fish toxicity

Parameter :	NOEC (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	1,73 mg/l

Acute (short-term) toxicity to crustacea

Parameter :	EC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	1 - 10 mg/l
Exposure time :	48 h
Method :	OECD 202

Chronic (long-term) toxicity to aquatic invertebrate

Parameter :	NOEC (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	1,36 mg/l
Exposure time :	21 D

Acute (short-term) toxicity to algae and cyanobacteria

Parameter :	EC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	OECD 201
Parameter :	EC50 (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Species :	Desmodesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	1 - 10 mg/l
Exposure time :	72 h
Method :	OECD 201

Toxicity to microorganisms

Parameter :	EC50 (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Species :	Bacteria toxicity
Effective dose :	140 mg/l
Parameter :	EC10 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Toxicity to microorganisms
Effective dose :	> 1995 mg/l
Exposure time :	30 min

12.2 Persistence and degradability

Biodegradation

Parameter :	Biodegradation (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Inoculum :	Degree of elimination
Evaluation parameter :	Anaerobic
Degradation rate :	> 60 %
Test duration :	60 D
Method :	OECD 311
Parameter :	BOD (% of COD) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic

Degradation rate :	95 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301C
Parameter :	CO2 formation (% of the theoretical value) (ISOTRIDECANOL, ETHOXYLATED (>= 2.5 EO) ; CAS No. : 69011-36-5)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	> 60 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B

According to the recipe, contains no AOX. The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

12.3 Bioaccumulative potential

No indication of bioaccumulation potential.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

Waste codes/waste designations according to EWC/AVV

07 06 01* (Aqueous washing liquids and mother liquors)
20 01 29* (Detergents containing hazardous substances)

Other disposal recommendations

P501 - Dispose of contents/container to industrial incineration plant. Dispose of waste according to applicable legislation. Dispose of contents/container to an appropriate recycling or disposal facility. Contaminated packages must be completely emptied and can be re-used following proper cleaning. Handle contaminated packages in the same way as the substance itself.

13.2 Additional information

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

14.1 UN number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

14.4 Packing group

No dangerous good in sense of these transport regulations.

14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

14.6 Special precautions for user

None

14.7 Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Restrictions on use

Use restriction according to REACH annex XVII, no. : 3, 55, 75

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

National regulations

Water hazard class

Classification according to AwSV - Class : 1 (Slightly hazardous to water)

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Indication of changes

02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] - Hazard components for labelling · 03. Hazardous ingredients · 08. Occupational exposure limit values · 15. Restrictions on use

16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (Europäisches Übereinkommen über die Beförderung gefährlicher Güter auf der Straße)
AOX: adsorbierbare organisch gebundene Halogene
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
CAS: Chemical Abstracts Service (Unterabteilung der American Chemical Society)
CLP: Verordnung (EG) Nr. 1272/2008 über die Einstufung, Kennzeichnung und Verpackung von Stoffen und Gemischen (Classification Labelling and Packaging)
EAK / AVV: europäischer Abfallartenkatalog / Abfallverzeichnis-Verordnung
ECHA: Europäische Chemikalienagentur (European Chemicals Agency)
EINECS: : Altstoffverzeichnis (European Inventory of Existing Commercial Chemical Substances)
GHS: Global harmonisiertes System zur Einstufung und Kennzeichnung von Chemikalien (Globally Harmonized System of Classifiaction and Labelling of Chemicals)
IATA: Internationale Luftverkehrs-Vereinigung (International Air Transport Association)
ICAO: Internationale Zivilluftfahrtorganisation (International Civil Aviation Organization)
IMDG: Gefahrgutkennzeichnung für gefährliche Güter im Seeschiffverkehr (International Maritime Code for Dangerous Goods)
RID: Regelung zur internationalen Beförderung gefährlicher Güter im Schienenverkehr (Règlement concernant le transport international ferroviaire de marchandises dangereuses)
TRGS: Technische Regel für den Umgang mit Gefahrstoffen
VbF: Verordnung über brennbare Flüssigkeiten
VOC: flüchtige organische Verbindung (volatile organic compound)
VVEA: Verordnung über die Vermeidung und die Entsorgung von Abfällen

VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3 Key literature references and sources for data

DGUV: GESTIS-Stoffdatenbank
ECHA: Classification And Labelling Inventory
ECHA: Pre-registered Substances
ECHA: Registered Substances
EC_Safety Data Sheet of Suppliers
ESIS: European Chemical Substances Information System
GDL: Gefahrstoffdatenbank der Länder
UBA Rigoletto: Wassergefährdende Stoffe
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council
Regulation (EC) No. 1272/2008 of the European Parliament and of the Council

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
Evaluation :
Asp. Tox. 1 : Calculation method.
Eye Irrit. 2 : Calculation method.

16.5 Relevant H- and EUH-phrases (Number and full text)

H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

16.6 Training advice

None

16.7 Additional information

None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.