

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : E-WELD Shield
Revision date : 02.11.2016
Print date : 06.12.2017

Version : 1.0.0

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

1.1 Product identifier

E-WELD Shield

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

Relevant identified uses

Coatings and paints, fillers, putties, thinners

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

Bio-Circle Surface Technology GmbH

Street : Berensweg 200

Postal code/city : 33334 Gütersloh

Telephone : +49 5241 9443 0

Telefax : +49 5241 9443 44

Information contact : labor@bio-circle.de

1.4 Emergency telephone number

+49 5241 9443 51 during normal office hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Aquatic Chronic 3 ; H412 - Hazardous to the aquatic environment : Chronic 3 ; Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

TRIS(2-ETHYLHEXYL) PHOSPHATE ; REACH registration No. : 01-2119517575-36-XXXX ; EC No. : 201-116-6; CAS No. : 78-42-2

Weight fraction : $\geq 1 - < 5 \%$

Classification 1272/2008 [CLP] : Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319

BUTYL CELLOSOLVE ; REACH registration No. : 01-2119475108-36-XXXX ; EC No. : 203-905-0; CAS No. : 111-76-2

Weight fraction : $\geq 1 - < 3 \%$

Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319

TRIZINC BIS(ORTHOPHOSPHATE) ; REACH registration No. : 01-2119485044-40-XXXX ; EC No. : 231-944-3; CAS No. : 7779-90-0

Weight fraction : $\geq 1 - < 3 \%$

Classification 1272/2008 [CLP] : Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410

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Additional information

Full text of H- and EUH-phrases: 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.

Following inhalation

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

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

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

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation.

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

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon dioxide (CO₂) Carbon monoxide

5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4 Additional information

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

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

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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) : 12

7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

BUTYL CELLOSOLVE ; CAS No. : 111-76-2

Limit value type (country of origin) : TRGS 900 (D)
Limit value : 20 ppm / 98 mg/m³
Peak limitation : 4(II)
Remark : H,Y
Version : 04.11.2017

Limit value type (country of origin) : STEL (EC)
Limit value : 50 ppm / 246 mg/m³
Remark : H
Version : 08.06.2000

Limit value type (country of origin) : TWA (EC)
Limit value : 20 ppm / 98 mg/m³
Remark : H
Version : 08.06.2000

Biological limit values

BUTYL CELLOSOLVE ; CAS No. : 111-76-2

Limit value type (country of origin) : TRGS 903 (D)
Parameter : Butoxy acetic acid / Urine (U) / At long term exposure: after several previous shifts
Limit value : 100 mg/l
Version : 31.03.2004

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



Wear protective gloves in case of longer lasting skin contact.

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Suitable gloves type : EN 374.
Suitable material : NBR (Nitrile rubber)
Breakthrough time (maximum wearing 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.

General health and safety measures

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 : liquid

Colour : light grey

Odour : characteristic

Safety relevant basis data

Initial boiling point and boiling range (1013 hPa)	>	100	°C
Flash point :		not determined	
Lower explosion limit :		not determined	
Upper explosion limit :		not determined	
Vapour pressure :	(50 °C)	not determined	
Density :	(20 °C)	1,4	g/cm ³
Solvent separation test :	(20 °C)	not determined	
pH :		7 - 8	
Flow time :	(20 °C)	not determined	DIN-cup 4 mm
Viscosity :	(20 °C)	300	mPa.s
Maximum VOC content (EC) :	<	3	Wt %
Maximum VOC content (Switzerland) :	<	3	Wt %

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

None known.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

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None known.

10.6 Hazardous decomposition products

No information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity

Parameter :	LD50 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 401
Parameter :	LD50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	1250 - 1490 mg/kg
Method :	OECD 401
Parameter :	LD50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 5000 mg/kg
Method :	OECD 401

Acute dermal toxicity

Parameter :	LD50 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	18400 mg/kg
Parameter :	LD50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	841 mg/kg
Method :	OECD 402

Acute inhalation toxicity

Parameter :	LC50 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 447 mg/m ³
Exposure time :	4 h
Parameter :	LC50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	2 - 20 mg/l
Exposure time :	4 h
Parameter :	LC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 5,7 mg/l
Exposure time :	4 h
Method :	OECD 403

11.2 Toxicokinetics, metabolism and distribution

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

11.3 Other adverse effects

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Frequently or prolonged contact with skin may cause dermal irritation.

11.4 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 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Species : Fish
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : > 500 mg/l
Exposure time : 48 h

Parameter : LC50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 1474 mg/l
Exposure time : 96 h

Method : OECD 203

Parameter : LC50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 1815 mg/l
Exposure time : 24 h

Method : DIN 38412 / part 11

Parameter : LC50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 297 mg/l
Exposure time : 21 d

Method : OECD 211

Parameter : LC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 0,169 - 2,17 mg/l
Exposure time : 96 h

Chronic (long-term) fish toxicity

Parameter : NOEC (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter : Chronic (long-term) fish toxicity
Effective dose : 0,199 mg/l
Exposure time : 30 d
Method : OECD 215

Acute (short-term) daphnia toxicity

Parameter : EC50 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : > 0,08 - 1 mg/l
Exposure time : 48 h

Method : Regulation (EC) No. 440/2008, Annex, C.2

Parameter : EC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 0,86 mg/l

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Exposure time : 48 h

Chronic (long-term) daphnia toxicity

Parameter : NOEC (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Brachydanio rerio (zebra-fish)
Evaluation parameter : Chronic (long-term) fish toxicity
Effective dose : > 100 mg/l
Exposure time : 21 d
Method : OECD 204

Parameter : NOEC (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 100 mg/l
Exposure time : 21 d
Method : OECD 211

Parameter : NOEC (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Algae
Effective dose : 286 mg/l
Exposure time : 72 h
Method : OECD 201

Parameter : NOEC (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 0,031 - 0,208 mg/l
Exposure time : 50 d

Acute (short-term) algae toxicity

Parameter : EC50 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Species : Desmodesmus subspicatus
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : > 0,876 mg/l
Exposure time : 72 h
Method : OECD 201

Parameter : EC50 (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Species : Algae
Effective dose : 1840 mg/l
Exposure time : 72 h
Method : OECD 201

Chronic (long-term) algae toxicity

Parameter : NOEC (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Pseudokirchneriella subcapitata
Evaluation parameter : Chronic (long-term) algae toxicity
Effective dose : 0,05 mg/l
Exposure time : 3 d
Method : OECD 201

Bacteria toxicity

Parameter : EC50 (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Species : Bacteria toxicity
Effective dose : 10 mg/l
Exposure time : 24 h

Parameter : EC50 (TRIZINC BIS(ORTHOPHOSPHATE) ; CAS No. : 7779-90-0)
Species : Bacteria toxicity
Effective dose : 5,2 mg/l
Exposure time : 3 h
Method : OECD 209

12.2 Persistence and degradability

Biodegradation

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Parameter : Biodegradation (TRIS(2-ETHYLHEXYL) PHOSPHATE ; CAS No. : 78-42-2)
Inoculum : Biodegradation
Effective dose : 0 %
Exposure time : 28 d
Evaluation : Poorly biodegradable.
Method : OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F
Parameter : Biodegradation (BUTYL CELLOSOLVE ; CAS No. : 111-76-2)
Inoculum : Biodegradation
Effective dose : 88 %
Exposure time : 20 d

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 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

None

SECTION 13: Disposal considerations

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. List of proposed waste codes/waste designations in accordance with EWC

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

08 02 03 - wässrige Suspensionen, die keramische Werkstoffe enthalten.

Waste code packaging

15 01 02 - plastic packaging.

Waste treatment options

Appropriate disposal / Package

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

These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use.

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

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No dangerous good in sense of these transport regulations.

14.6 Special precautions for user

None

SECTION 15: Regulatory information

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

EU legislation

Other regulations (EU)

Restrictions of occupation

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

National regulations

AT: Labelling according to Austrian regulations (Chemikaliengesetz/ChemV).
CH: Chemikalienverordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

Water hazard class (WGK)

Class : 1 (Slightly hazardous to water) Classification according to VwVwS

Other regulations, restrictions and prohibition regulations

Betriebsicherheitsverordnung (BetrSichV)

No flammable liquid according to BetrSichV.

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

None

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
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 Classification 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)
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3 Key literature references and sources for data

DGUV: GESTIS-Stoffdatenbank
ECHA: Classification And Labelling Inventory

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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]

No information available.

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

H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.
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.
