

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 23-May-2019

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Revision Number 2.01

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

1.1. Product identifier

Product Code(s) 47584

Safety data sheet number 47584

Product Name REACT PERFORMANCE DOT4 BRAKE FLUID

Synonyms REACT PERF DOT 4 15037B, REACT PERF DOT 4 15037C, REACT PERF DOT 4 15037D, REACT PERF DOT 4 15037E, REACT PERF DOT 4 15037F, REACT PERF DOT 4 15038A, REACT PERF DOT 4 157F8B, REACT PERF DOT 4 157F8C, REACT PERF DOT 4 15A1EC, REACT PERF DOT 4 15A1ED, REACT PERF DOT 4 15BDF8, REACT PERF DOT 4 15CC7A, REACT PERF DOT 4 15CC7B, REACT PERF DOT 4 15CC79, REACT PERF DOT 4 15CC7C, REACT PERF DOT 4 15CC77, REACT PERF DOT 4 15CC78, REACT PERF DOT 4 15F26F, REACT PERF DOT 4 15F270, REACT PERF DOT 4 15F271, REACT PERF DOT 4 15F272, REACT PERF DOT 4 15F273, REACT PERF DOT 4 16070D, REACT PERF DOT 4 160E3C, REACT PERF DOT 4 161DB3

Pure substance/mixture Mixture

Contains TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE

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

Recommended use Brake fluid

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Reproductive toxicity	Category 2 - (H361d)
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2.2. Label elements

Contains TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE

**Signal word**

Warning

Hazard statements

H361d - Suspected of damaging the unborn child

Precautionary statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown aquatic toxicity**2.3. Other hazards**

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE 30989-05-0	60 - 70%	250-418-4	-	Repr. 2 (H361fd)	-	-	-
2,2'-OXYBISETHANOL 111-46-6	0 - 10%	203-872-2 (603-140-00-6)	-	Acute Tox. 4 (H302)	-	-	-
1,1'-IMINODIPROP	0 - 10%	203-820-9	-	Eye Irrit. 2 (H319)	-	-	-

AN-2-OL 110-97-4		(603-083-00 -7)					
TRIETHYLENE GLYCOL MONOETHYL ETHER 112-35-6	0 - 10%	203-962-1	-	-	-	-	-
REACTION MASS OF 3,6,9,12-TETRAOX OTRIDEKAN-1-OL AND 3,6,9,12,15-PENTA OXAHEXADECAN- 1-OL -	0 - 10%	-	-	-	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention if symptoms occur.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Rinse mouth.

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

Eyes	May cause temporary eye irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Use personal protection equipment.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Chemical name	United Kingdom
2,2'-OXYBISETHANOL 111-46-6	TWA: 23 ppm TWA: 101 mg/m ³ STEL: 69 ppm STEL: 303 mg/m ³

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE 30989-05-0		4.2 mg/kg [4] [6]	14.8 mg/m ³ [4] [6]
2,2'-OXYBISETHANOL 111-46-6		43 mg/kg bw/day [4] [6]	44 mg/m ³ [4] [6] 60 mg/m ³ [5] [6]
1,1'-IMINODIPROPAN-2-OL 110-97-4		5 mg/kg bw/day [4] [6] 0.120 mg/cm ² [5] [6]	6.4 mg/m ³ [4] [6]
TRIETHYLENE GLYCOL MONOETHYL ETHER 112-35-6		167 mg/kg/day [4] [6]	
REACTION MASS OF 3,6,9,12-TETRAOXOTRIDEKAN-1-OL AND 3,6,9,12,15-PENTAOXAHEXADECAN -1-OL -		167 mg/kg/day [4] [6]	156 mg/m ³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE 30989-05-0	2.6 mg/kg/day [4] [6]	1.5 mg/kg/day [4] [6]	1.5 mg/m ³ [4] [6]
2,2'-OXYBISETHANOL 111-46-6		21 mg/kg/day [4] [6]	12 mg/m ³ [4] [6] 12 mg/m ³ [5] [6]
1,1'-IMINODIPROPAN-2-OL 110-97-4	1.3 mg/kg bw/day [4] [6]	6.3 mg/kg bw/day [4] [6]	3.9 mg/m ³ [4] [6]
TRIETHYLENE GLYCOL MONOETHYL ETHER 112-35-6	10 mg/kg/day [4] [6]	100 mg/kg/day [4] [6]	
REACTION MASS OF 3,6,9,12-TETRAOXOTRIDEKAN-1-OL	10 mg/kg/day [4] [6]	100 mg/kg/day [4] [6]	104 mg/m ³ [4] [6]

Chemical name	Oral	Dermal	Inhalation
AND 3,6,9,12,15-PENTAOXAHEXADECAN -1-OL -			

[4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
TRIS[2-[2-(2-METHOXYE THOXY)ETHOXY]ETHYL] ORTHOBORATE 30989-05-0	0.211 mg/l	2.112 mg/L	0.02112 mg/L		
2,2'-OXYBISETHANOL 111-46-6	10 mg/L	10 mg/L	1 mg/L		
1,1'-IMINODIPROPAN-2- OL 110-97-4	0.2777 mg/l	2.777 mg/L	0.02777 mg/l		
TRIETHYLENE GLYCOL MONOETHYL ETHER 112-35-6	10 mg/l	50 mg/L	1 mg/l		
REACTION MASS OF 3,6,9,12-TETRAOXOTRID ECAN-1-OL AND 3,6,9,12,15-PENTAOXAH EXADECAN-1-OL -	10 mg/l		1 mg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
TRIS[2-[2-(2-METHOXYE THOXY)ETHOXY]ETHYL] ORTHOBORATE 30989-05-0	0.76 mg/kg/day	0.076 mg/kg/day	100 mg/L	0.028 mg/kg/day	100 mg/l
2,2'-OXYBISETHANOL 111-46-6	20.9 mg/kg sediment dw	2.09 mg/kg sediment dw	199.5 mg/L	1.53 mg/kg soil dw	
1,1'-IMINODIPROPAN-2- OL 110-97-4	2.33 mg/kg sediment dw	0.233 mg/kg sediment dw	15 g/L	0.303 mg/kg	
TRIETHYLENE GLYCOL MONOETHYL ETHER 112-35-6	36.6 mg/kg/day	3.66 mg/kg/day	200 mg/L	1.56 mg/kg/day	200 mg/l
REACTION MASS OF 3,6,9,12-TETRAOXOTRID ECAN-1-OL AND 3,6,9,12,15-PENTAOXAH EXADECAN-1-OL -	36.5 mg/kg	3.65 mg/kg		1.53 mg/kg	200 mg/l

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state Liquid
Appearance Liquid
Colour yellow
Odour Characteristic.
Odour threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	< -70 °C	< -70°C.
Initial boiling point and boiling range	> 260 °C	>260°C.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits	1.5%	
Flash point	~ 134 °C	Closed cup.
Autoignition temperature	> 200 °C	>200°C.
Decomposition temperature	~ 360 °C	~ 360°C.
pH		pH (concentrated solution): 7 - 8.5.
pH (as aqueous solution)	7.0 - 8.5	solution (50.0 %).
Kinematic viscosity		No information available.
Dynamic viscosity	15 - 17 mm ² /s @ 20°C - 17.0	@ 20.0 °C.
Water solubility	Soluble in water	
Solubility(ies)		No information available.
Partition coefficient		No information available.
Vapour pressure	< 1 mbar @ 20°C	@ 20.0 °C.
Relative density	1.065 - 1.085 @ 20°C - 1.085	20.0 °C.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	

Particle Size Distribution	No information available
Explosive properties	Not considered to be explosive.
Oxidising properties	No information available

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Stable under recommended storage conditions.
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10.2. Chemical stability

Stability	Stable under recommended storage conditions. Hygroscopic.
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Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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10.4. Conditions to avoid

Conditions to avoid	None known based on information supplied.
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10.5. Incompatible materials

Incompatible materials	None known based on information supplied.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Carbon oxides.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation.
Eye contact	May cause temporary eye irritation.
Skin contact	May cause slight irritation.
Ingestion	Gastrointestinal discomfort.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 5,050.50 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE	> 2000 mg/kg (Rat)	> 2000 mg/kg (rat)	-
2,2'-OXYBISETHANOL	= 1000 mg/kg (Rat)	= 13300 mg/kg (Rabbit)	> 4.6 mg/L (Rat) 4 h
1,1'-IMINODIPROPAN-2-OL	= 4765 mg/kg (Rat)	= 8000 mg/kg (Rabbit)	-
TRIETHYLENE GLYCOL MONOETHYL ETHER	= 11300 mg/kg (Rat) = 11.8 g/kg (Rat)	= 7100 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404	Rabbit	Dermal			non-irritant

2,2'-OXYBISETHANOL (111-46-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Human evidence	Dermal	112 mg l	72 hours	Mild skin irritant
	Rabbit	Dermal	500 mg		Mild skin irritant

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404	Rabbit	Dermal			non-irritant

Serious eye damage/eye irritation No information available.

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405	Rabbit	eye			non-irritant

2,2'-OXYBISETHANOL (111-46-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	eye	50 mg		Mild eye irritation

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405	Rabbit	eye			Irritant

Respiratory or skin sensitisation No information available.

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Exposure route	Results
OECD 406	Guinea pig	Dermal	Not a skin sensitiser

2,2'-OXYBISETHANOL (111-46-6)

Method	Species	Exposure route	Results
Draize Test Guinea pig maximisation test (GPMT)	Guinea pig	Dermal	Not a skin sensitiser

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Species	Exposure route	Results
OECD 406	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity

No information available.

Component Information

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Results
OECD 471	in vitro	Not mutagenic in AMES Test
OECD 476	in vitro	Not mutagenic
OECD 473	in vitro	Not mutagenic

2,2'-OXYBISETHANOL (111-46-6)

Method	Species	Results
Ames Test	in vitro	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	Mouse	Negative

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Species	Results
OECD 473	in vitro	Not mutagenic
OECD 471	in vitro	Not mutagenic in AMES Test
OECD 476	in vitro	Not mutagenic

Carcinogenicity

No information available.

Reproductive toxicity

Suspected of damaging the unborn child.

Chemical name	United Kingdom
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE	Reproductive toxicant

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Results
OECD 443	Rat	Reproductive toxicant
OECD Test No. 414: Pre-natal Development Toxicity Study	Rabbit	Reproductive toxicant

2,2'-OXYBISETHANOL (111-46-6)

Method	Species	Results
OECD Test No. 414: Pre-natal Development Toxicity Study	Rabbit	NOAEL 1000 mg/kg

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Species	Results
OECD 414	Rat	Negative

STOT - single exposure

No information available.

STOT - repeated exposure No information available.

Component Information

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 408	Rat	Oral	1000 mg/kg bw/d		NOAEL

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 408	Rat	Oral	> 100 mg/kg bw/d	90 days	NOAEL
OECD 410	Rat	Dermal	100 mg/kg bw/d	28 days	NOAEL

Aspiration hazard No information available.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

Unknown aquatic toxicity

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	> 222.2 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	> 211.2 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	EC50	> 224.4 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	EC50	> 1000 mg/L	30 minutes	

2,2'-OXYBISETHANOL (111-46-6)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Pimephales promelas	LC50	75200 mg/L	96 hours	
	Pimephales promelas	NOEC	15380 mg/L	7 days	
	Daphnia magna	EC50	48900 mg/L	48 hours	
	Pseudokirchneriella subcapitata	EC50	6500 - 13000 mg/L	96 hours	
	activated sludge	EC20	> 1995 mg/L	30 minutes	
Chronic toxicity	Daphnia magna	NOEC	> 15000 mg/L	21 days	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE	EC50: =430mg/L (96h, Pseudokirchneriella subcapitata)	LC50: > 222.2 mg/l (96h, Oncorhynchus mykiss)	EC50: > 1000 mg/l (0.5h, activated sludge)	EC50: >1000mg/L (48h, Daphnia magna)
2,2'-OXYBISETHANOL	-	-	-	EC50: =84000mg/L (48h, Daphnia magna)
1,1'-IMINODIPROPAN-2-OL	EC50: =270mg/L (72h, Desmodesmus subspicatus)	LC50: 1000 - 2200mg/L (96h, Brachydanio rerio)	-	EC50: =277.7mg/L (48h, Daphnia magna Straus)
TRIETHYLENE GLYCOL MONOETHYL ETHER	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: >5000mg/L (96h, Brachydanio rerio) LC50: >10000mg/L (96h, Pimephales promelas)	-	EC50: >500mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE (30989-05-0)

Method	Exposure time	Value	Results
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A)	10 days	Biodegradation > 70%	Readily biodegradable

2,2'-OXYBISETHANOL (111-46-6)

Method	Exposure time	Value	Results
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A)	28 days	Biodegradation 90 - 100%	Readily biodegradable
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	28 days	Biodegradation 82 - 98%	Readily biodegradable

1,1'-IMINODIPROPAN-2-OL (110-97-4)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	94% Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE	-1.47
2,2'-OXYBISETHANOL	-1.98
1,1'-IMINODIPROPAN-2-OL	-0.79
TRIETHYLENE GLYCOL MONOETHYL ETHER	-1.12

12.4. Mobility in soil

Mobility in soil Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
TRIS[2-[2-(2-METHOXYETHOXY)ETHOXY]ETHYL] ORTHOBORATE	The substance is not PBT / vPvB
2,2'-OXYBISETHANOL	The substance is not PBT / vPvB
1,1'-IMINODIPROPAN-2-OL	The substance is not PBT / vPvB
TRIETHYLENE GLYCOL MONOETHYL ETHER	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information**IATA**

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable

14.6 Special precautions for user

Special Provisions None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
2,2'-OXYBISETHANOL - 111-46-6	3	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment**Chemical Safety Report**

No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

*

Skin designation

+ Sensitisers

Revision Note ***Indicates updated data since last publication

Classification procedure

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

Method Used

Acute oral toxicity

Calculation method

Acute dermal toxicity

Calculation method

Acute inhalation toxicity - gas

Calculation method

Acute inhalation toxicity - vapour

Calculation method

Acute inhalation toxicity - dust/mist

Calculation method

Skin corrosion/irritation

Calculation method

Serious eye damage/eye irritation

Calculation method

Respiratory sensitisation

Calculation method

Skin sensitisation

Calculation method

Mutagenicity

Calculation method

Carcinogenicity

Calculation method

STOT - single exposure

Calculation method

STOT - repeated exposure

Calculation method

Acute aquatic toxicity

Calculation method

Chronic aquatic toxicity

Calculation method

Aspiration hazard

Calculation method

Ozone

Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGl(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet