

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

Supersedes date 08-Sep-2023

Revision date 08-Sep-2023

Revision Number 6

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

1.1. Product identifier

Product Code(s)	21456
Safety data sheet number	21456
Product Name	DIPROPYLENE GLYCOL N-BUTYLETHER
EC Number	249-951-5
CAS No	29911-28-2
Synonyms	DOWANOL DPNB, DPNB, DOWANOL DPNB GLYCOL ETHER
Pure substance/mixture	Substance
Molecular weight	190.28 g/mol

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

Recommended use	Industrial solvent for cleaner and coating formulations. Manufacture of substance Intermediate Formulation & (re)packing of substances and mixtures. Coatings Cleaning agent Lubricant Metal working fluids / rolling oils, Use in oil and gas field drilling and production operations Use in agrochemicals Industrial use Professional use Consumer use
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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**

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified

2.3. Other hazards

No information available.

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

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)
DIPROPYLENE GLYCOL N-BUTYLETHER 29911-28-2	> 98.5 %	249-951-5	-	-	-	-	-

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**

First aid personnel should wear appropriate protective equipment during any rescue. Use personal protection recommended in Section 8.

Inhalation

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if

symptoms occur.

Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if symptoms occur.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

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

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

Note to doctors	Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, 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

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed. Closed containers can burst violently when heated, due to excess pressure build-up. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids..
Hazardous combustion products	Carbon oxides. Aldehydes. Ketone. Organic Acids.

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.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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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	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. 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.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Wash thoroughly after handling. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.
General hygiene considerations	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. See section 10 for more information.
Packaging materials	Suitable container/equipment material: Carbon Steel. stainless steel. Phenolic lined steel drums. Unsuitable container/equipment material. Aluminium. copper. Galvanized iron. Galvanized steel.

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.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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
DIPROPYLENE GLYCOL N-BUTYLETHER 29911-28-2		134 mg/kg bw/day [4] [6]	189 mg/m ³ [4] [6]

[4] Systemic health effects.

[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
DIPROPYLENE GLYCOL N-BUTYLETHER 29911-28-2	16 mg/kg bw/day [4] [6]	80 mg/kg bw/day [4] [6]	56 mg/m ³ [4] [6]

[4] Systemic health effects.

[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
DIPROPYLENE GLYCOL N-BUTYLETHER 29911-28-2	0.519 mg/L	5.19 mg/L	0.0519 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
DIPROPYLENE GLYCOL N-BUTYLETHER 29911-28-2	2.96 mg/kg sediment dw	0.296 mg/kg sediment dw	100 mg/L	0.287 mg/kg soil dw	

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 Wear suitable gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Wear protective butyl rubber gloves	> 0.35 mm	> 120 minutes
	Ethyl vinyl alcohol laminate ("EVAL")	> 0.35 mm	> 120 minutes
	Wear protective Neoprene™ gloves	> 0.35 mm	> 120 minutes
	Nitrile/butadiene rubber ("nitrile" or "NBR").	> 0.35 mm	> 120 minutes

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection Use appropriate respiratory protection.
Organic gases and vapours filter conforming to EN 14387. Type A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Colourless
Odour	Ether.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	< -75	Read-across.
Initial boiling point and boiling range	230 °C	@ 760 mmHg. Read-across.
Flammability		No information available.
Flammability Limit in Air		Read-across.
Upper flammability or explosive limits	20.4 % vol	
Lower flammability or explosive limits	0.6 % vol	
Flash point	100.4 °C	@ 1013 hPa. Setaflash closed cup. ASTM D3828.
Autoignition temperature	194 °C	Read-across.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity	4.9 mm ² /s	@ 25 °C. Read-across.
Dynamic viscosity		No information available.
Water solubility	Soluble in water	
Solubility(ies)	42 g/l @ 25°C	Read-across.
Partition coefficient	1.523	Estimated.
Vapour pressure	4 Pa	@ 20 °C. Read-across.
Relative density	0.910	@ 25 °C / 25 °C. Read-across.
Bulk density		No information available
Liquid Density	0.9128 g/cm ³	@ 19.8 °C Read-across
Relative vapour density	6.60	Read-across.
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	Does not meet the criteria for classification as oxidising	

9.2. Other information

Molecular weight	190.28 g/mol
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

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.

Hazardous polymerisation Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Do not distill to dryness. Product can oxidise at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Aldehydes. Ketone. Organic Acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact May cause slight eye irritation.

Skin contact Prolonged contact may cause slight skin irritation with local redness.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
DIPROPYLENE GLYCOL N-BUTYLETHER	= 3700 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 2.04 mg/l (Rat) 4 h

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

Skin corrosion/irritation Prolonged contact may cause slight skin irritation with local redness.

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Prolonged contact may cause slight skin irritation with local redness

Serious eye damage/eye irritation May cause temporary eye irritation. May cause slight eye irritation.

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight eye irritation

Respiratory or skin sensitisation Not a skin sensitiser.

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Exposure route	Results
	Human evidence	Dermal	Not a skin sensitiser
	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity Not mutagenic.

Component Information

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Results
	in vitro	Negative
		Negative Did not show mutagenic effects in animal experiments

Carcinogenicity Did not cause cancer in laboratory animals.

Component Information

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Results
		Did not cause cancer in laboratory animals.

Reproductive toxicity This product does not contain any known or suspected reproductive hazards.

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Results
		This product does not contain any known or suspected reproductive hazards

STOT - single exposure Evaluation of available data suggests that this material is not an STOT-SE toxicant.

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Evaluation of available data suggests that this material is not an STOT-SE toxicant

STOT - repeated exposure

In animals, effects have been reported on the following organs: Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Component Information

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Aspiration hazard

Based on available data the classification criteria are not met.

Other adverse effects

No information available.

SECTION 12: Ecological information**12.1. Toxicity****Ecotoxicity**

Not considered to be harmful to aquatic life.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test or Equivalent.	Poecilia reticulata	LC50	841 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test or Equivalent.	Daphnia magna	LC50	> 1000 mg/L	48 hours	

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test or Equivalent.	Poecilia reticulata	LC50	841 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test or Equivalent.	Daphnia magna	LC50	> 1000 mg/L	48 hours	

12.2. Persistence and degradability**Persistence and degradability** No information available.

Method	Exposure time	Value	Results
OECD Test No. 301E: Ready Biodegradability: Modified OECD Screening Test (TG 301 E) or Equivalent.	28 days	Biodegradation 91 %	Readily biodegradable
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A) or Equivalent.	21 days	Biodegradation 95 %	Readily biodegradable
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B) or Equivalent.	28 days	Biodegradation 96 %	Readily biodegradable

DIPROPYLENE GLYCOL N-BUTYLETHER (29911-28-2)

Method	Exposure time	Value	Results
OECD Test No. 301E: Ready Biodegradability: Modified OECD Screening Test (TG 301 E) or Equivalent.	28 days	Biodegradation 91 %	Readily biodegradable
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A) or Equivalent.	21 days	Biodegradation 95 %	Readily biodegradable
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B) or Equivalent.	28 days	Biodegradation 96 %	Readily biodegradable

12.3. Bioaccumulative potential**Bioaccumulation** There is no data for this product.

Chemical name	Partition coefficient
DIPROPYLENE GLYCOL N-BUTYLETHER	1.523

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
DIPROPYLENE GLYCOL N-BUTYLETHER	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	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
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	No
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	No
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 does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Product restricted per REACH Annex XVII: 75

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 Chemical Safety Assessment has been carried out for this substance/mixture

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****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 **SDS sections updated 1 4 5 6 7 8 9 10 11 12 15****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
Reproductive toxicity	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

Prepared By Lisa Bland

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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