

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Product name : VERSAPASS® DN Cyan

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Ink.

1.2.2. Uses advised against

Restrictions on use : No additional information available

1.3. Details of the supplier of the safety data sheet

Memjet Ltd.
Trintech Building
South County Business Park
Leopardstown
Dublin D18 H5H9 Ireland
T +353 1 678 0420
msds@memjet.com - www.memjet.com

1.4. Emergency telephone number

Emergency number : For Hazardous Materials Incidents (spill, leak, fire, exposure, or accident) call: CHEMTREC:
U.S. 1-800-424-9300 International: +1-703-527-3887 CHEMTREC (24 HOURS)

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 healthcare professionals 24/7 +353 1 8092166 public, 8-10 7/7	UFI 9F00-D0UF-4006-4GYV

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

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

EUH-statements : EUH208 - Contains 1,2-benzisothiazolone(2634-33-5). May produce an allergic reaction.
EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

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

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	70 - 80	Not classified

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Ethylene glycol REACH 01-2119456816-28-XXXX	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1	8	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Glycerol	(CAS-No.) 56-81-5 (EC-No.) 200-289-5	1 - 5	Not classified
1,2-benzisothiazolone	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9 (EC Index-No.) 613-088-00-6	0.04	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400
Specific concentration limits:			
Name	Product identifier	Specific concentration limits	
1,2-benzisothiazolone	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9 (EC Index-No.) 613-088-00-6	(0.05 =<C < 100) Skin Sens. 1, H317	

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Gently wash with plenty of soap and water.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Symptoms/effects after inhalation : None under normal use.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : None under normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No special procedures required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Presents no particular fire or explosion hazard.

Explosion hazard : Product is not explosive.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use extinguishing media appropriate for surrounding fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Take up small spills with dry chemical absorbent.

6.1.2. For emergency responders

Emergency procedures : Take up small spills with dry chemical absorbent.

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6.2. Environmental precautions

Do not discharge into drains or the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

6.4. Reference to other sections

Section 7: safe handling. Section 8: personal protective equipment. Section 13: disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Avoid all eye and skin contact and do not breathe vapour and mist. Use personal protective equipment as required. Do not eat, drink or smoke when using this product.

Hygiene measures

: Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store in original container. Store away from heat.

7.3. Specific end use(s)

Inkjet printing.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerol (56-81-5)		
United Kingdom	WEL TWA (mg/m³)	10 mg/m³

Ethylene glycol (107-21-1)		
EU	Local name	Ethylene glycol
EU	IOELV TWA (mg/m³)	52 mg/m³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m³)	104 mg/m³
EU	IOELV STEL (ppm)	40 ppm
EU	Notes	Skin
United Kingdom	WEL TWA (mg/m³)	52 mg/m³ (vapour, Sk) 10 mg/m³ (Sk)
United Kingdom	WEL TWA (ppm)	20 ppm (vapour, Sk)
United Kingdom	WEL STEL (mg/m³)	104 mg/m³ (vapour, Sk)
United Kingdom	WEL STEL (ppm)	40 ppm (vapour, Sk)

8.2. Exposure controls

Appropriate engineering controls:

No special work practices are needed beyond the above recommendations under anticipated conditions of normal use.

Hand protection:

None under normal use.

Eye protection:

None under normal use

Respiratory protection:

None under normal use

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Blue. liquid.
Colour	: Blue.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 7.1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: > 1
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

	Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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Glycerol (56-81-5)	
LD50 oral rat	5570 mg/kg

Water (7732-18-5)	
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 6 mg/l/4h

Ethylene glycol (107-21-1)	
LD50 dermal rat	> 3500 mg/kg mouse
LC50 inhalation rat (mg/l)	> 2.5 mg/l/4h
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 2.5 mg/l/4h

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)

Ethylene glycol (107-21-1)	
LOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day kidney

Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Glycerol (56-81-5)	
LC50 fish 1	68 - 72 mg/l

Ethylene glycol (107-21-1)	
LC50 fish 1	72860 mg/l Pimephales promelas
EC50 Daphnia 1	> 100 mg/l
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l Ceriodaphnia sp.

12.2. Persistence and degradability

VERSAPASS® DN Cyan	
Persistence and degradability	Not established.

Glycerol (56-81-5)	
Persistence and degradability	Readily biodegradable.

Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.

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12.3. Bioaccumulative potential

ethylene glycol (107-21-1)

Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

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Ecology - soil	No additional information available.
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12.5. Results of PBT and vPvB assessment

Component	
Glycerol (56-81-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Ethylene glycol (107-21-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects Endocrine Disrupting Properties

Additional information : Do not discharge into drains or the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not remove as household garbage. Dispose in a safe manner in accordance with local/national regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not regulated.

UN-No. (IMDG) : Not regulated.

UN-No. (IATA) : Not regulated.

UN-No. (ADN) : Not regulated.

UN-No. (RID) : Not regulated.

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated.

Proper Shipping Name (IMDG) : Not regulated.

Proper Shipping Name (IATA) : Not regulated.

Proper Shipping Name (ADN) : Not regulated.

Proper Shipping Name (RID) : Not regulated.

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated.

IMDG

Transport hazard class(es) (IMDG) : Not regulated.

IATA

Transport hazard class(es) (IATA) : Not regulated.

ADN

Transport hazard class(es) (ADN) : Not regulated.

RID

Transport hazard class(es) (RID) : Not regulated.

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14.4. Packing group

Packing group (ADR) : Not regulated.
Packing group (IMDG) : Not regulated.
Packing group (IATA) : Not regulated.
Packing group (ADN) : Not regulated.
Packing group (RID) : Not regulated.

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

Inland waterway transport

Not regulated.

Rail transport

Not regulated.

14.7. Transport in bulk according to the instruments of the International Maritime Organization and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:	
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Ethylene glycol
3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Ethylene glycol

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments
2.2	EUH-statements	Added	
3	Composition/information on ingredients	Modified	

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4.2	Symptoms/effects after inhalation	Added	
4.2	Symptoms/effects after skin contact	Added	
4.2	Symptoms/effects after eye contact	Added	
11.1	Reason for no classification	Added	
15.1	REACH Annex XVII	Added	
1.3	Address change	Modified	

Abbreviations and acronyms:

ACGIH (American Conference of Government Industrial Hygienists)
ATE Acute Toxicity Estimate
CAS (Chemical Abstracts Service) number
CLP: Classification, Labelling, Packaging.
EC50: Environmental Concentration associated with a response by 50% of the test population.
GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
LD50: Lethal Dose for 50% of the test population
TWA: Time Weighted Average

Data sources : ACGIH (American Conference of Government Industrial Hygienists).
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
Manufacturer Information.
US National Library of Medicine National Institutes of Health Haz-Map. Accessed at <http://hazmap.nlm.nih.gov>.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
EUH208	Contains 1,2-benzisothiazolone(2634-33-5). May produce an allergic reaction.
EUH210	Safety data sheet available on request.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product