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**SECTION 1: Identification**

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**1.1. Identification**

Product form : Mixture  
Name : VERSAPASS® DA Cyan

**1.2. Recommended use and restrictions on use**

Use of the substance/mixture : printing inks  
Restrictions on use : Other

**1.3. Supplier**

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)

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**SECTION 2: Hazard(s) identification**

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**2.1. Classification of the substance or mixture****GHS US classification**

Specific target organ toxicity (repeated exposure) Category 2 H373 May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS US labeling**

Hazard pictograms (GHS) :



Signal word (GHS) : Warning  
Hazard statements (GHS) : H373 - May cause damage to organs through prolonged or repeated exposure  
Precautionary statements (GHS) : P260 - Do not breathe mist, spray.  
P314 - Get medical advice/attention if you feel unwell.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**2.3. Other hazards which do not result in classification**

No additional information available

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### 2.4. Unknown acute toxicity (GHS)

1% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)

1% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

1% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Ethylene glycol	CAS-No.: 107-21-1	5 - <10	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Cyan dye	CAS-No.: 12222-04-7	1 - <5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373 Aquatic Chronic 2, H411
Glycerol (glycerin, glycerine)	CAS-No.: 56-81-5	1 - 5	Not classified

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and 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 (acute and delayed)

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.

### 4.3. Immediate medical attention and special treatment, if necessary

No special procedures required.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

Fire hazard : No particular fire or explosion hazard.

Explosion hazard : Product is not explosive.

### 5.3. Special protective equipment and precautions for fire-fighters

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.

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### 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.

#### 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 contact with skin, eyes and clothing.  
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.  
Incompatible products : None known.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

VERSAPASS® DA Cyan	
No additional information available	
Ethylene glycol (107-21-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethylene glycol
ACGIH OEL TWA [ppm]	25 ppm (V - Vapor fraction)
ACGIH STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (I - Inhalable particulate matter, H - Aerosol only)
ACGIH OEL STEL [ppm]	50 ppm (V - Vapor fraction)
ACGIH OEL Ceiling	100 mg/m <sup>3</sup>
ACGIH OEL Ceiling [ppm]	39.4 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021

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### Glycerol (glycerin, glycerine) (56-81-5)

#### USA - ACGIH - Occupational Exposure Limits

ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
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### Cyan dye (12222-04-7)

No additional information available

#### 8.2. Appropriate engineering controls

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

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

nitrile rubber gloves

##### Eye protection:

None under normal use

##### Respiratory protection:

None under normal use

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Blue liquid.
Color	: Blue
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

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### 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

No additional information available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

VERSAPASS® DA Cyan	
Unknown acute toxicity (GHS)	1% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 1% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 1% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Ethylene glycol (107-21-1)	
LD50 Oral rat	7712 mg/kg Source: ECHA
LD50 Dermal rat	> 3500 mg/kg
LC50 Inhalation rat	> 2.5 mg/l/4h
ATE (oral)	500 mg/kg body weight

Glycerol (glycerin, glycerine) (56-81-5)	
LD50 Oral rat	12600 mg/kg body weight Animal: rat, Animal sex: female
LD50 Dermal rabbit	> 10000 mg/kg
ATE (oral)	12600 mg/kg body weight

Cyan dye (12222-04-7)	
ATE (oral)	500 mg/kg body weight

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified

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STOT-single exposure : Not classified  
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

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 kidneys
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Cyan dye (12222-04-7)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Likely routes of exposure : Skin and eye contact.  
Symptoms/effects : May cause damage to organs through prolonged or repeated exposure

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

Ethylene glycol (107-21-1)	
LC50 fish 1	72860 mg/l Pimephales promelas
EC50 crustacea	> 100 mg/l Daphnia magna
NOEC (chronic)	≥ 1000 mg/l Americamysis bahia, 23 d
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l Ceriodaphnia sp.

Glycerol (glycerin, glycerine) (56-81-5)	
LC50 fish 1	54000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

### 12.2. Persistence and degradability

Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 60 % 28 days

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

### 12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

Glycerol (glycerin, glycerine) (56-81-5)	
Log Pow	-1.75 Source: ECHA

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### 12.4. Mobility in soil

#### Ethylene glycol (107-21-1)

Mobility in soil

0.2 Source: HSDB

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Do not dispose in 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 DOT / TDG / IMDG / IATA

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable

Proper Shipping Name (TDG) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : Not applicable

#### TDG

Transport hazard class(es) (TDG) : Not applicable

#### IMDG

Transport hazard class(es) (IMDG) : Not applicable

#### IATA

Transport hazard class(es) (IATA) : Not applicable

### 14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (TDG) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

### 14.5. Environmental hazards

Other information : No supplementary information available.

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### 14.6. Special precautions for user

#### DOT

No data available

#### TDG

No data available

#### IMDG

No data available

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Ethylene glycol	107-21-1	Present	Active	
Glycerol (glycerin, glycerine)	56-81-5	Present	Active	
Cyan dye	12222-04-7	Not present	-	

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Ethylene glycol	CAS-No. 107-21-1	5 - <10%
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#### Ethylene glycol (107-21-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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### 15.2. International regulations

#### CANADA

#### Ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

#### Glycerol (glycerin, glycerine) (56-81-5)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### Glycerol (glycerin, glycerine) (56-81-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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### National regulations

#### Ethylene glycol (107-21-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Glycerol (glycerin, glycerine) (56-81-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on KECI (Korean Existing Chemicals Inventory)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

### 15.3. US State regulations

 **WARNING:** This product can expose you to Ethylene glycol (ingested), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

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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-phrases

H302	Harmful if swallowed
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

### 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

Safety Data Sheet (SDS), USA

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.