



# DuraFlex® PZ Cyan

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 9/15/2021 Revision date: 12/21/2023 Version: 1.2

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : DuraFlex® PZ Cyan

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Inkjet ink  
Restrictions on use : Any use not specified

#### 1.3. Supplier

|                            |                        |
|----------------------------|------------------------|
| Memjet, Ltd                | Memjet                 |
| Trintech Building          | 16770 W Bernardo Drive |
| South Dublin Business Park | San Diego, CA 92127    |
| Leopardstown               | T +858 673 3300        |
| Dublin D18 H5H9 Ireland    | www.memjet.com         |
| T +353 1 678 0420          |                        |
| msds@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)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

No labeling obligation.

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

No additional information available

#### 2.4. Unknown acute toxicity (GHS)

0.17% 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 |
|--------------------------------------------------------------|--------------------|---------|-----------------------|
| Water                                                        | CAS-No.: 7732-18-5 | 80 - 85 | Not classified        |
| 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether | CAS-No.: 112-34-5  | 3 – 4   | Eye Irrit. 2A, H319   |
| Glycerol                                                     | CAS-No.: 56-81-5   | 3 – 4   | 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

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### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

|                                       |                                                                  |
|---------------------------------------|------------------------------------------------------------------|
| First-aid measures general            | : Get medical advice/attention if you feel unwell.               |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | : Wash skin with mild soap and water.                            |
| First-aid measures after eye contact  | : Rinse eyes with water as a precaution.                         |
| First-aid measures after ingestion    | : Call a poison center/doctor/physician if you feel unwell.      |

#### 4.2. Most important symptoms and effects (acute and delayed)

|                  |                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms/effects | : This product is not hazardous. Medical conditions aggravated by exposure: None known or reported. Treat symptomatically and supportively. |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|

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

Treat symptomatically.

### SECTION 5: Fire-fighting measures

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

|                                |                                                  |
|--------------------------------|--------------------------------------------------|
| Suitable extinguishing media   | : Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : None known.                                    |

#### 5.2. Specific hazards arising from the chemical

|                                                  |                                           |
|--------------------------------------------------|-------------------------------------------|
| Fire hazard                                      | : No particular fire or explosion hazard. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released.            |

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

|                                |                                                                                                                                          |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

|                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| General measures | : Avoid all eye and skin contact and do not breathe vapor and mist. |
|------------------|---------------------------------------------------------------------|

##### 6.1.1. For non-emergency personnel

|                      |                         |
|----------------------|-------------------------|
| Protective equipment | : Refer to section 8.2. |
|----------------------|-------------------------|

##### 6.1.2. For emergency responders

|                      |                                     |
|----------------------|-------------------------------------|
| Protective equipment | : Refer to section 8.2.             |
| Emergency procedures | : Avoid contact with skin and eyes. |

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

|                         |                                                                 |
|-------------------------|-----------------------------------------------------------------|
| Methods for cleaning up | : Take up liquid spill into absorbent material.                 |
| Other information       | : Dispose of materials or solid residues at an authorized site. |

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

|                               |                                                                 |
|-------------------------------|-----------------------------------------------------------------|
| Precautions for safe handling | : Do not breathe mist, spray. Avoid contact with skin and eyes. |
|-------------------------------|-----------------------------------------------------------------|

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Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| DuraFlex® PZ Cyan                                                       |                                                   |
|-------------------------------------------------------------------------|---------------------------------------------------|
| No additional information available                                     |                                                   |
| 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether (112-34-5) |                                                   |
| USA - ACGIH - Occupational Exposure Limits                              |                                                   |
| Local name                                                              | Diethylene glycol monobutyl ether                 |
| ACGIH OEL TWA [ppm]                                                     | 10 ppm (IFV - Inhalable fraction and vapor)       |
| Remark (ACGIH)                                                          | TLV® Basis: Hematologic, liver & kidney eff       |
| Regulatory reference                                                    | ACGIH 2020                                        |
| Glycerol (56-81-5)                                                      |                                                   |
| USA - ACGIH - Occupational Exposure Limits                              |                                                   |
| ACGIH TWA (mg/m³)                                                       | 10 mg/m³                                          |
| USA - OSHA - Occupational Exposure Limits                               |                                                   |
| Local name                                                              | Glycerin (mist)                                   |
| OSHA PEL (TWA) [1]                                                      | 15 mg/m³ (total)<br>5 mg/m³ (respirable fraction) |
| Regulatory reference (US-OSHA)                                          | OSHA Annotated Table Z-1                          |
| Water (7732-18-5)                                                       |                                                   |
| No additional information available                                     |                                                   |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

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

#### Personal protective equipment:

Avoid all unnecessary exposure.

| Hand protection:                         |
|------------------------------------------|
| Protective gloves. nitrile rubber gloves |
| Eye protection:                          |
| Safety glasses                           |
| Skin and body protection:                |
| Wear suitable protective clothing        |

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### 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                                  | : Opaque liquid.            |
| Color                                       | : Blue                      |
| Odor                                        | : odorless                  |
| Odor threshold                              | : No data available         |
| pH                                          | : 9 – 10                    |
| Melting point                               | : Not applicable            |
| 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)                   | : Not applicable.           |
| Vapor pressure                              | : No data available         |
| Relative vapor density at 20 °C             | : No data available         |
| Relative density                            | : No data available         |
| Solubility                                  | : Miscible with 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                        | : Product is not explosive. |
| Oxidizing properties                        | : No oxidizing properties.  |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

None under normal use.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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### 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

| DuraFlex® PZ Cyan            |                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------|
| Unknown acute toxicity (GHS) | 0.17% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)) |

#### 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether (112-34-5)

|                    |                        |
|--------------------|------------------------|
| LD50 oral rat      | 4500 mg/kg             |
| LD50 dermal rabbit | 2700 mg/kg             |
| ATE (oral)         | 4500 mg/kg body weight |
| ATE (dermal)       | 2700 mg/kg body weight |

#### Glycerol (56-81-5)

|                    |                         |
|--------------------|-------------------------|
| LD50 oral rat      | 12600 mg/kg             |
| LD50 dermal rabbit | > 10000 mg/kg           |
| ATE (oral)         | 12600 mg/kg body weight |

#### Water (7732-18-5)

|               |            |
|---------------|------------|
| LD50 oral rat | > 90 ml/kg |
|---------------|------------|

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  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Likely routes of exposure : Dermal.  
Symptoms/effects : This product is not hazardous. Medical conditions aggravated by exposure: None known or reported. Treat symptomatically and supportively.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether (112-34-5)

|             |                                    |
|-------------|------------------------------------|
| LC50 fish 1 | 2000 mg/l 96 hr- Menidia beryllina |
|-------------|------------------------------------|

#### 12.2. Persistence and degradability

| DuraFlex® PZ Cyan             |                                      |
|-------------------------------|--------------------------------------|
| Persistence and degradability | No additional information available. |

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### Glycerol (56-81-5)

|                               |                        |
|-------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |
|-------------------------------|------------------------|

### 12.3. Bioaccumulative potential

### DuraFlex® PZ Cyan

|                           |                                    |
|---------------------------|------------------------------------|
| Bioaccumulative potential | No bioaccumulation data available. |
|---------------------------|------------------------------------|

### 12.4. Mobility in soil

### DuraFlex® PZ Cyan

|                |                                      |
|----------------|--------------------------------------|
| Ecology - soil | No additional information available. |
|----------------|--------------------------------------|

### 12.5. Other adverse effects

Other adverse effects : No data available.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Do not dispose of waste into public or municipal sewer.  
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: Transport information

In accordance with Department of Transport / 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

#### 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 (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

#### 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

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

##### 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether (112-34-5)

Listed on the Canadian DSL (Domestic Substances List)

##### Glycerol (56-81-5)

Listed on the Canadian DSL (Domestic Substances List)

##### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

##### 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether (112-34-5)

Listed on the AICS (Australian Inventory of Chemical Substances)

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

##### Water (7732-18-5)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)

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### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

| Component         | State or local regulations                                                                                 |
|-------------------|------------------------------------------------------------------------------------------------------------|
| Glycerol(56-81-5) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

### SECTION 16: Other information

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Data sources

: European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.  
European Standards: Personal Protective Equipment; accessed at: [http://ec.europa.eu/enterprise/policies/european-standards/harmonised-standards/personal-protective-equipment/index\\_en.htm](http://ec.europa.eu/enterprise/policies/european-standards/harmonised-standards/personal-protective-equipment/index_en.htm).  
European Chemicals Agency (ECHA) Registered Substances list.  
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.

| Full text of H-phrases |                               |
|------------------------|-------------------------------|
| H319                   | Causes serious eye irritation |

| Abbreviations and acronyms |                                                                             |
|----------------------------|-----------------------------------------------------------------------------|
| ATE                        | Acute Toxicity Estimate                                                     |
| CLP                        | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| EC50                       | Median effective concentration                                              |
| IARC                       | International Agency for Research on Cancer                                 |
| LD50                       | Median lethal dose                                                          |
| SDS                        | Safety Data Sheet                                                           |

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.

SDS by: Memjet, Ltd  
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