



# SAFETY DATA SHEET

PM QUATRO PM ASS FUN TK12 PE PEN

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

### 1.1 Product identifier

**Product name** : PM QUATRO PM ASS FUN TK12 PE PEN  
**Product code** : S0977270  
**Product description** : INKS FOR PM QUATRO PEN  
**Product type** : Liquid.  
**Other means of identification** : PM QUATRO PEN; S0977270; PM QUATRO PM ASS FUN TK12 PE

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

#### Identified uses

Not applicable.

#### Uses advised against

Not applicable.

### 1.3 Details of the supplier of the safety data sheet

Newell Europe Sàrl  
Chemin de Blandonnet 8, 1214 Vernier/Genève

**e-mail address of person responsible for this SDS** : Aftersales.SERVICE@newellco.com

### 1.4 Emergency telephone number

#### National advisory body/Poison Center

**Telephone number** : Austria - 01 406 43 43  
Belgium - 070 245 245  
Bulgaria - +359 2 9154 233  
Croatia - 01 2348 342  
Cyprus - 1401  
Czech Republic - 224 91 92 93  
Denmark - +45 8212 1212  
Estonia - 16662  
Finland - 0800 147 111  
France - + 33 (0)1 45 42 59 59  
Germany - +4930 30686700  
Greece - (0030) 2107793777  
Hungary - +36 80 201 199  
Ireland - 353 (1) 809 2166  
Italy - 02 661.010.29  
Latvia - +371 67042473  
Lithuania - +370 (85) 2362052  
Malta - +356 25456508  
Netherlands - +31 (0)88 755 8000  
Poland - 607 218 174  
Portugal - +351 800 250 250  
Romania - +40213183606  
Slovakia - +421 2 54 774 166  
Slovenia - 112  
Spain - +34 91 562 04 20  
Sweden - 112

#### Supplier

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

Telephone number :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

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

**PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK**

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Aquatic Chronic 2, H411

**PM INKJOY-CP ULV T BLUE BALL PEN INK**

Eye Irrit. 2, H319

Skin Sens. 1, H317

Aquatic Chronic 3, H412

**PM INKJOY-CP ULV VIOLET BALL PEN INK**

Skin Irrit. 2, H315

Eye Dam. 1, H318

Aquatic Chronic 3, H412

**PM INKJOY-CP ULV PINK BALL PEN INK**

Eye Irrit. 2, H319

Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** : 32.6 percent of the mixture consists of component(s) of unknown acute oral toxicity  
35 percent of the mixture consists of component(s) of unknown acute dermal toxicity  
76.8 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

**Ingredients of unknown ecotoxicity** : Contains 32.6% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

## SECTION 2: Hazards identification

**Hazard pictograms** : PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK



PM INKJOY-CP ULV T BLUE BALL PEN INK



PM INKJOY-CP ULV VIOLET BALL PEN INK



PM INKJOY-CP ULV PINK BALL PEN INK



**Signal word** : PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK  
 PM INKJOY-CP ULV T BLUE BALL PEN INK  
 PM INKJOY-CP ULV VIOLET BALL PEN INK  
 PM INKJOY-CP ULV PINK BALL PEN INK

Warning  
 Warning  
 Danger  
 Warning

**Hazard statements** :

### Precautionary statements

**General** : Read carefully and follow all instructions. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention** : Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

**Response** : Collect spillage. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**Storage** : Not applicable.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : **PM INKJOY-CP ULV VIOLET BALL PEN INK**  
 Phosphoric acid, 2-ethylhexyl ester

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Yes, applicable.

### 2.3 Other hazards

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## SECTION 2: Hazards identification

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b>					
2-phenoxyethanol	REACH #: 01-2119488943-21 EC: 204-589-7 CAS: 122-99-6 Index: 603-098-00-9	≥25 - ≤50	Acute Tox. 4, H302 Eye Irrit. 2, H319	ATE [Oral] = 1260 mg/kg	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6	≤10	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	ATE [Oral] = 1230 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1]
disulfo copper phthalocyanine amine salt	EC: 215-523-1 CAS: 1328-51-4	≤10	Eye Irrit. 2, H319 Aquatic Chronic 3, H412	-	[1]
1,1'-oxydipropan-2-ol	EC: 203-821-4 CAS: 110-98-5	≤10	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
2-(2-ethoxyethoxy)ethanol	EC: 203-919-7 CAS: 111-90-0	≤3	Eye Irrit. 2, H319	-	[1]
(Z)-octadec-9-enylamine	EC: 204-015-5 CAS: 112-90-3 Index: 612-283-00-3	≤3	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, immune system, liver) Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg STOT RE 2, H373: C ≥ 10% M [Acute] = 10 M [Chronic] = 10	[1]
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b>					
2-phenoxyethanol	REACH #: 01-2119488943-21 EC: 204-589-7 CAS: 122-99-6 Index: 603-098-00-9	≥25 - ≤50	Acute Tox. 4, H302 Eye Irrit. 2, H319	ATE [Oral] = 1260 mg/kg	[1]
disulfo copper phthalocyanine amine salt	EC: 215-523-1 CAS: 1328-51-4	≥10 - ≤25	Eye Irrit. 2, H319 Aquatic Chronic 3, H412	-	[1]

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1,1'-oxydipropan-2-ol	EC: 203-821-4 CAS: 110-98-5	≤10	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
2-(2-ethoxyethoxy)ethanol	EC: 203-919-7 CAS: 111-90-0	≤3	Eye Irrit. 2, H319	-	[1]
(Z)-octadec-9-enylamine	EC: 204-015-5 CAS: 112-90-3 Index: 612-283-00-3	≤3	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, immune system, liver) Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg STOT RE 2, H373: C ≥ 10% M [Acute] = 10 M [Chronic] = 10	[1]
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b>					
2-phenoxyethanol	REACH #: 01-2119488943-21 EC: 204-589-7 CAS: 122-99-6 Index: 603-098-00-9	≥25 - ≤50	Acute Tox. 4, H302 Eye Irrit. 2, H319	ATE [Oral] = 1260 mg/kg	[1]
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1,1'-oxydipropan-2-ol	EC: 203-821-4 CAS: 110-98-5	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
Phosphoric acid, 2-ethylhexyl ester	EC: 235-741-0 CAS: 12645-31-7	≤5	Skin Corr. 1C, H314 Eye Dam. 1, H318	-	[1]
2-(2-ethoxyethoxy)ethanol	EC: 203-919-7 CAS: 111-90-0	≤3	Eye Irrit. 2, H319	-	[1]
(Z)-octadec-9-enylamine	EC: 204-015-5 CAS: 112-90-3 Index: 612-283-00-3	≤1	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, immune system, liver) Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg STOT RE 2, H373: C ≥ 10% M [Acute] = 10 M [Chronic] = 10	[1]
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b>					

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### SECTION 3: Composition/information on ingredients

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2-(2-ethoxyethoxy)ethanol	EC: 203-919-7 CAS: 111-90-0	≤3	Eye Irrit. 2, H319	-	[1]
(Z)-octadec-9-enylamine	EC: 204-015-5 CAS: 112-90-3 Index: 612-283-00-3	≤1	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, immune system, liver) Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 <b>See Section 16 for the full text of the H statements declared above.</b>	ATE [Oral] = 500 mg/kg STOT RE 2, H373: C ≥ 10% M [Acute] = 10 M [Chronic] = 10	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

#### Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## SECTION 4: First aid measures

- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
phosphorus oxides  
metal oxide/oxides

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

## SECTION 5: Firefighting measures

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### 6.3 Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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



## SECTION 7: Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK E2	200 tonne	500 tonne
PM INKJOY-CP ULV PINK BALL PEN INK E2	200 tonne	500 tonne

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK 2-phenoxyethanol	DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Oral	9.23 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	9.23 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	10.42 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	20.83 mg/kg bw/day	Workers	Systemic

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**SECTION 8: Exposure controls/personal protection**

benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	5.4 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	22 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	27 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	110 mg/m <sup>3</sup>	Workers	Systemic	
	2-(2-ethoxyethoxy)ethanol	DNEL	Long term Inhalation	18 mg/m <sup>3</sup>	General population	Local
		DNEL	Long term Dermal	25 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	30 mg/m <sup>3</sup>	Workers	Local
DNEL		Long term Inhalation	37 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Oral	50 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	61 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	83 mg/kg bw/day	Workers	Systemic	
DNEL		Long term Dermal	0.9 mg/cm <sup>2</sup>	General population	Local	
DNEL		Long term Dermal	1.5 mg/cm <sup>2</sup>	Workers	Local	
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> 2-phenoxyethanol		DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Oral	9.23 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Oral	9.23 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	10.42 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	20.83 mg/kg bw/day	Workers	Systemic	
	benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	5.4 mg/m <sup>3</sup>	General population	Systemic	

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2-(2-ethoxyethoxy)ethanol	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	18 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Dermal	25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	30 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	37 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	50 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	61 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	0.9 mg/cm <sup>2</sup>	General population	Local
	DNEL	Long term Dermal	1.5 mg/cm <sup>2</sup>	Workers	Local
	<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> 2-phenoxyethanol	DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population
DNEL		Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Systemic
DNEL		Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Local
DNEL		Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Systemic
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DNEL		Long term Dermal	10.42 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	20.83 mg/kg bw/day	Workers	Systemic
DNEL		Long term Oral	4 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	4 mg/kg bw/day	General population	Systemic
benzyl alcohol	DNEL	Long term Inhalation	5.4 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic

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**SECTION 8: Exposure controls/personal protection**

Phosphoric acid, 2-ethylhexyl ester	DNEL	Long term Inhalation	22 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	27 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	110 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Oral	6.25 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	6.25 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	10.42 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	10.87 mg/m <sup>3</sup>	General population	Systemic	
2-(2-ethoxyethoxy)ethanol	DNEL	Long term Inhalation	36.73 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	18 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Dermal	25 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	30 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	37 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Oral	50 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	61 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	0.9 mg/cm <sup>2</sup>	General population	Local	
	DNEL	Long term Dermal	1.5 mg/cm <sup>2</sup>	Workers	Local	
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> 2-phenoxyethanol	DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	2.41 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	5.7 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Oral	9.23 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Oral	9.23 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	10.42 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	20.83 mg/kg bw/day	Workers	Systemic	
	benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	5.4 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Dermal	8 mg/kg bw/day	Workers	Systemic	

## SECTION 8: Exposure controls/personal protection

Phosphoric acid, 2-ethylhexyl ester	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	6.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	6.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	10.42 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	10.87 mg/m <sup>3</sup>	General population	Systemic
2-(2-ethoxyethoxy)ethanol	DNEL	Long term Inhalation	36.73 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	18 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Dermal	25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	30 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	37 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	50 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	61 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	0.9 mg/cm <sup>2</sup>	General population	Local
	DNEL	Long term Dermal	1.5 mg/cm <sup>2</sup>	Workers	Local

### PNECs

No PNECs available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection

## SECTION 8: Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Color** : Various
- Odor** : Not available.
- Odor threshold** : Not available.
- Melting point/freezing point** :
- Initial boiling point and boiling range** :
- Flammability** : Not available.
- Lower and upper explosion limit** :
- Flash point** : Closed cup: 101°C (213.8°F)
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Not available.
- Solubility(ies)** :
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/ water** :
- Vapor pressure** : Not available.
- Evaporation rate** :
- Relative density** :
- Density** :
- Vapor density** : Not available.
- Explosive properties** : Not available.
- Oxidizing properties** : Not available.

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## SECTION 9: Physical and chemical properties

### Particle characteristics

Median particle size : Not applicable.

### 9.2 Other information

Molecular weight :

## SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

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

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b>				
2-phenoxyethanol	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
benzyl alcohol	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
1,1'-oxydipropan-2-ol	LD50 Oral	Rat	14800 mg/kg	-
2-(2-ethoxyethoxy)ethanol	LD50 Oral	Rat	7500 mg/kg	-
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b>				
2-phenoxyethanol	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
benzyl alcohol	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
1,1'-oxydipropan-2-ol	LD50 Oral	Rat	14800 mg/kg	-
2-(2-ethoxyethoxy)ethanol	LD50 Oral	Rat	7500 mg/kg	-
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b>				
2-phenoxyethanol	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
benzyl alcohol	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
1,1'-oxydipropan-2-ol	LD50 Oral	Rat	14800 mg/kg	-
2-(2-ethoxyethoxy)ethanol	LD50 Oral	Rat	7500 mg/kg	-
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b>				
2-phenoxyethanol	LD50 Dermal	Rat	14422 mg/kg	-

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## SECTION 11: Toxicological information

benzyl alcohol	LD50 Oral	Rat	1260 mg/kg	-
	LD50 Dermal	Rabbit	2000 mg/kg	-
1,1'-oxydipropan-2-ol	LD50 Oral	Rat	1230 mg/kg	-
2-(2-ethoxyethoxy)ethanol	LD50 Oral	Rat	14800 mg/kg	-
	LD50 Oral	Rat	7500 mg/kg	-

**Conclusion/Summary** : Not available.

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b>					
2-phenoxyethanol	1260	14422	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	11	N/A
1,1'-oxydipropan-2-ol	14800	N/A	N/A	N/A	N/A
2-(2-ethoxyethoxy)ethanol	7500	N/A	N/A	N/A	N/A
(Z)-octadec-9-enylamine	500	N/A	N/A	N/A	N/A
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b>					
2-phenoxyethanol	1260	14422	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	11	N/A
1,1'-oxydipropan-2-ol	14800	N/A	N/A	N/A	N/A
2-(2-ethoxyethoxy)ethanol	7500	N/A	N/A	N/A	N/A
(Z)-octadec-9-enylamine	500	N/A	N/A	N/A	N/A
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b>					
2-phenoxyethanol	1260	14422	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	11	N/A
1,1'-oxydipropan-2-ol	14800	N/A	N/A	N/A	N/A
2-(2-ethoxyethoxy)ethanol	7500	N/A	N/A	N/A	N/A
(Z)-octadec-9-enylamine	500	N/A	N/A	N/A	N/A
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b>					
2-phenoxyethanol	1260	14422	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	11	N/A
1,1'-oxydipropan-2-ol	14800	N/A	N/A	N/A	N/A
2-(2-ethoxyethoxy)ethanol	7500	N/A	N/A	N/A	N/A
(Z)-octadec-9-enylamine	500	N/A	N/A	N/A	N/A

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b>					
2-phenoxyethanol	Eyes - Moderate irritant	Rabbit	-	6 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 250 ug	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
benzyl alcohol	Skin - Mild irritant	Man	-	48 hours 16 mg	-
	Skin - Moderate irritant	Pig	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
1,1'-oxydipropan-2-ol	Eyes - Mild irritant	Rabbit	-	500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 uL	-
2-(2-ethoxyethoxy)ethanol	Eyes - Mild irritant	Rabbit	-	125 mg	-
	Eyes - Moderate irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500	-



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## SECTION 11: Toxicological information

				mg		
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> 2-phenoxyethanol	Eyes - Moderate irritant Eyes - Severe irritant	Rabbit	-	6 mg	-	
		Rabbit	-	24 hours 250 ug	-	
	benzyl alcohol	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
		Skin - Mild irritant	Man	-	48 hours 16 mg	-
	1,1'-oxydipropan-2-ol	Skin - Moderate irritant	Pig	-	100 %	-
		Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	2-(2-ethoxyethoxy)ethanol	Eyes - Mild irritant	Rabbit	-	500 mg	-
		Eyes - Moderate irritant	Rabbit	-	24 hours 500 uL	-
		Skin - Mild irritant	Rabbit	-	125 mg	-
	<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> 2-phenoxyethanol	Eyes - Moderate irritant Eyes - Severe irritant	Rabbit	-	6 mg	-
			Rabbit	-	24 hours 250 ug	-
		benzyl alcohol	Skin - Mild irritant	Rabbit	-	24 hours 500 mg
Skin - Mild irritant			Man	-	48 hours 16 mg	-
1,1'-oxydipropan-2-ol		Skin - Moderate irritant	Pig	-	100 %	-
		Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
2-(2-ethoxyethoxy)ethanol		Eyes - Mild irritant	Rabbit	-	500 mg	-
		Eyes - Moderate irritant	Rabbit	-	24 hours 500 uL	-
		Skin - Mild irritant	Rabbit	-	125 mg	-
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> 2-phenoxyethanol		Eyes - Moderate irritant Eyes - Severe irritant	Rabbit	-	6 mg	-
			Rabbit	-	24 hours 250 ug	-
		benzyl alcohol	Skin - Mild irritant	Rabbit	-	24 hours 500 mg
	Skin - Mild irritant		Man	-	48 hours 16 mg	-
	1,1'-oxydipropan-2-ol	Skin - Moderate irritant	Pig	-	100 %	-
		Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	2-(2-ethoxyethoxy)ethanol	Eyes - Mild irritant	Rabbit	-	500 mg	-
		Eyes - Moderate irritant	Rabbit	-	24 hours 500 uL	-
		Skin - Mild irritant	Rabbit	-	125 mg	-

**Conclusion/Summary** : Not available.

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## SECTION 11: Toxicological information

### Sensitization

**Conclusion/Summary** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 3	-	Respiratory tract irritation
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 3	-	Respiratory tract irritation
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 3	-	Respiratory tract irritation
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 2	-	gastrointestinal tract, immune system, liver
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 2	-	gastrointestinal tract, immune system, liver
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 2	-	gastrointestinal tract, immune system, liver
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> (Z)-octadec-9-enylamine	Category 2	-	gastrointestinal tract, immune system, liver

### Aspiration hazard

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## SECTION 11: Toxicological information

Product/ingredient name	Result
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b> (Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> (Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> (Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> (Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation.  
**Ingestion** : Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.  
**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** :

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Not available.

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## SECTION 11: Toxicological information

### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b> 2-phenoxyethanol benzyl alcohol 2-(2-ethoxyethoxy)ethanol	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 10000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 3340000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 6010000 µg/l Fresh water	Fish - Ictalurus punctatus	96 hours
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> 2-phenoxyethanol benzyl alcohol 2-(2-ethoxyethoxy)ethanol	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 10000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 3340000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 6010000 µg/l Fresh water	Fish - Ictalurus punctatus	96 hours
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> 2-phenoxyethanol benzyl alcohol 2-(2-ethoxyethoxy)ethanol	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 10000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 3340000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 6010000 µg/l Fresh water	Fish - Ictalurus punctatus	96 hours
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> 2-phenoxyethanol benzyl alcohol 2-(2-ethoxyethoxy)ethanol	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 10000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 3340000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 6010000 µg/l Fresh water	Fish - Ictalurus punctatus	96 hours

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b> 2-phenoxyethanol benzyl alcohol 1,1'-oxydipropan-2-ol 2-(2-ethoxyethoxy)ethanol	1.107	0.3493	low
	0.87	-	low
	-1.5 to -0.7	4.57	low
	-0.54	-	low
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> 2-phenoxyethanol benzyl alcohol 1,1'-oxydipropan-2-ol 2-(2-ethoxyethoxy)ethanol	1.107	0.3493	low
	0.87	-	low
	-1.5 to -0.7	4.57	low
	-0.54	-	low

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## SECTION 12: Ecological information

<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b>			
2-phenoxyethanol	1.107	0.3493	low
benzyl alcohol	0.87	-	low
1,1'-oxydipropan-2-ol	-1.5 to -0.7	4.57	low
Phosphoric acid, 2-ethylhexyl ester	<0.3	-	low
2-(2-ethoxyethoxy)ethanol	-0.54	-	low
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b>			
2-phenoxyethanol	1.107	0.3493	low
benzyl alcohol	0.87	-	low
1,1'-oxydipropan-2-ol	-1.5 to -0.7	4.57	low
Phosphoric acid, 2-ethylhexyl ester	<0.3	-	low
2-(2-ethoxyethoxy)ethanol	-0.54	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

Not available.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

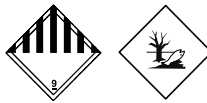
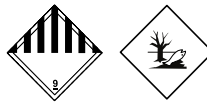
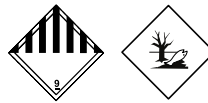
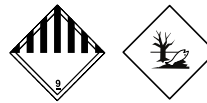
**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN3082	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((Z)-octadec-9-enylamine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((Z)-octadec-9-enylamine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((Z)-octadec-9-enylamine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((Z)-octadec-9-enylamine)
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.

### Additional information

**ADR/RID** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

#### **Tunnel code (-)**

**ADN** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorization

##### Annex XIV

None of the components are listed.

##### Substances of very high concern

None of the components are listed.

## SECTION 15: Regulatory information

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

### Ozone depleting substances (1005/2009/EU)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

Category
PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK E2
PM INKJOY-CP ULV PINK BALL PEN INK E2

### National regulations

### International regulations

### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : At least one component is not listed.  
**Canada** : All components are listed or exempted.  
**China** : All components are listed or exempted.  
**Eurasian Economic Union** : **Russian Federation inventory**: Not determined.  
**Japan** : **Japan inventory (CSCL)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.

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## SECTION 15: Regulatory information

<b>New Zealand</b>	: At least one component is not listed.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: At least one component is not listed.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: At least one component is not listed.
<b>Viet Nam</b>	: All components are listed or exempted.
<b>15.2 Chemical Safety Assessment</b>	: This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative
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### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b> Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	Expert judgment Expert judgment Expert judgment
<b>PM INKJOY-CP ULV T BLUE BALL PEN INK</b> Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412	Expert judgment Expert judgment Expert judgment
<b>PM INKJOY-CP ULV VIOLET BALL PEN INK</b> Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412	Expert judgment Expert judgment Expert judgment
<b>PM INKJOY-CP ULV PINK BALL PEN INK</b> Eye Irrit. 2, H319 Aquatic Chronic 2, H411	Expert judgment Expert judgment

### Full text of abbreviated H statements

<b>PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK</b>	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.



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H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

### PM INKJOY- CP ULV T BLUE BALL PEN INK

H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

### PM INKJOY- CP ULV VIOLET BALL PEN INK

H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

### PM INKJOY- CP ULV PINK BALL PEN INK

H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.

[Full text of classifications \[CLP/GHS\]](#)

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### PM INKJOY-CP ULV LIGHT GREEN BALL PEN INK

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

### PM INKJOY-CP ULV T BLUE BALL PEN INK

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

### PM INKJOY-CP ULV VIOLET BALL PEN INK

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

### PM INKJOY-CP ULV PINK BALL PEN INK

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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## SECTION 16: Other information

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