

100-18 - Gel Ink Refill

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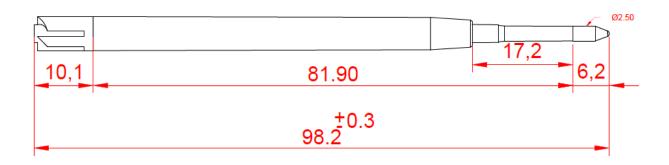
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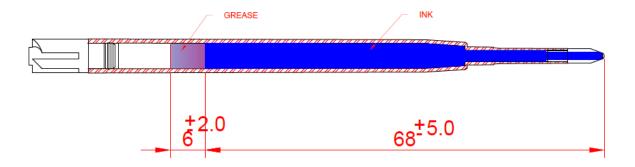
Revision Number: 1

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Code	Description
100-181	Pen Refill Fully Detectable Blue Gel
100-182	Pen Refill Fully Detectable Black Gel
100-183	Pen Refill Fully Detectable Red Gel
100-184	Pen Refill Fully Detectable Green Gel





All Dimensions in mm











Refill Ink

1. Ingredient information

Diethylene glycol mono ethyl either cas #111-90-0 osha pel not established tlv-acgih not established.

Sara 311 catagories

Immediate (acute) health effects Yes Delayed (chronic) health effects No Fire hazard No Sudden release of pressure hazard No Reactivity hazard No

2. Hazards identification

The health hazards of this product should be low under normal industrial and commercial uses. Prolonged or repeated contact may cause skin or eye irritation. D not allow material to enter soil or surface water.

HMIS rating

Health = 1 Flammability = 0 Reactivity = 0 Special = 0

Potential health effects

Eye May cause slight irritation. Not known to cause permanent injury to the eye tissue. No hazards expected in normal industrial use.

Skin May cause slight irritation. Not known to cause permanent injury to skin. No hazards expected in normal industrial use.

Inhalation No known risks due to inhalation. No hazards expected in normal undustrial use. **Ingestion** Essentially non-toxic

3. First aid measures

Eye contact In case of contact immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persisits.

Skin contact In case of contact immediately was your skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

Inhalation Although this product is not known to cause respiratory problems, if breathing is difficult, move to fresh air and provide oxygen. Get medical attention if cough or other symptons develop. **Imgestion** If swallowed immediately give 2 glasses of water. Never gie anything by mouth to an unconscious person. Contact a physician.

4. Firefighting measures











Flash point Not established Auto ignition Not established LEL Not established UEL Not established

Extinguishing media Dry chemical, alcohol foam, CO2, Sand, water.

Firefighting instructions As in any fire, wear self contained breathing apparatus pressure deman MSHA/NIOSH (approved or equilavent) and full protective gear. Avoid breathing smoke, fumes and decomposition products. Contain runoff water. Contaminated extinguishing water must be disposed of in accordance with applicable regulations.

5. Accidental release measures

Spill procedure Water and alcohol will increase the amount of colourant contamination. Do not allow material to enter soil or surface water. Clean up area by absorbant material. Take up and place in secure closed containers. All waste materials should be packaged, labelled and transported in accordance with all national, state/provincial and local requirments.

Initial containment Contain spilled material. Do not allow material to enter soil or surface water.

6. Handling and storage

Handling (personnel) Wash hands throughly after handling. Wash contaminated clothing before reuse. **Handling (physical aspects)** Avoid extreme temperatures. Keep container closed to avoid contamination.

Storage precautions Protect containers from physical damage. Do not stack drums more than three pallets high.

7. Exposure controls/personal protection

Engineering controls Good general ventilation should be sufficient to control airborne levels. **Eye/face protection requirements** Wear safety glasses at all times when using this liquid to avoid the possibility of splashing in the eyes.

8. Physical/chemical characteristics

Form	Liquid
Boiling point	Greater than 400°F
Specific gravity	1.1 - 1.14
Melting point	Not established
Vapor pressure (MM HG)	O.I.@ 68°F
Vapor density (Air = 1)	Approx 4
Evaporation rate (butyl acetate=1)	More than 1
Solubility/Water	Fully soluble











9. Stability and reactivity

Stability This product is stable at ambient conditions. **Polymerization** Hazardous polymerization will not occur. **Incompatibility with other materials** Avoid contact with strong oxidizing agents. **Decomposition** Decomposition will not occur if handled and stored properly.

10. Toxicological information

Burning may cause carbon monoxide and/or carbon dioxide or other toxic organic compounds.

11. Ecological information

No information available

12. Disposable considerations

Waste disposal Waste disposal should be in accordance with existing state and local environmental regulations.

13. Transportation information

Product label Free flow ink **D.O.T hazard class** Non-hazardous

14. Regulatory information

Chemical inventory information This material or all of its components are listed on the inventory of exiding chemical substances under the toxic substance control act (TSCA)

1. Technical features

Housing material	Fully detectable plastic
Ball material	Special corrosion free carbide
Line width	Fine (following ISO 14145-1)
Performance	150mg/ 100 mtrs ± 15% when tested under ISO 12757-1 test – ISO 554 23/50 climatic-
	conditions and ENGL 1818 blue ink
Typical application	Gel point refill ISO 14145-1 type G2 jumbo style refills











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Helen Morrison

Group Managing Director







