

Material Safety Data Sheet

QUICK IDENTIFIER (In Place Common Name)

BEROL BOLDLINER F-30 and 7700

AS 5014B

Manufacturer's Name: BEROL USA, DIVISION OF BEROL CORPORATION
Address: Eagle Road, Danbury, CT 06810

Emergency Telephone No. (203) 744-0000
Other Information Calls (203) 744-0000

Signature of Person Responsible for Preparation: *Edward J. Phillips*

Date Prepared: November 24, 1986

SECTION 1 - IDENTITY

Common Name: (used on label)
(Trade Name & Synonyms) Berol F-30 Boldliner

Cas No. Not Applicable

Chemical Name: Aqueous Ink Pen

Chemical Family: Water and Amide

Formula: Proprietary

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical & common name(s))	%	Threshold Limit Value (units)
Formamide	20-40%	20 ppm

* As a manufactured item this product conforms to 16-CFR-1500 Consumer Products Safety Act, and is therefore exempt from the OSHA Hazard Communication Law. This Material Safety Data Sheet is provided as a service to our customers, but is not required by law. The details below are for the ink in bulk. In normal use, in the marker form, these products are NOT HAZARDOUS.

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point: 120°C.	Specific Gravity (H ₂ O = 1): 1.00-1.08	Vapor Pressure (mm Hg): 29.7mm @ 129.4°C.
Percent Volatile by Volume (%): 40-60%	Vapor Density (Air = 1): > 1	Evaporation Rate (EPA = 1): < 1
Solubility in Water: Complete	Reactivity in Water: None	
Appearance and Odor: Writing pen, plastic barrel. (Color indicates ink color).		

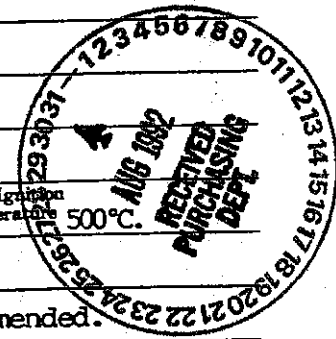
Flash Point: 175°C (TCC)
Flammable Limits in Air % by Volume: None Established
Lower Upper Extinguisher Media: H₂O, Dry Chemical, CO₂

Auto-Ignition Temperature: 500°C.

Special Fire Fighting Procedures: 1. In the marker form, none is needed.
2. In bulk, self contained breathing apparatus is recommended.

Unusual Fire and Explosion Hazards: When stored in bulk, the markers can be a slight explosion hazard when exposed to high heat, open flames, and strong oxidizers.

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SECTION 4 - PHYSICAL HAZARDS

Stability Unstable Conditions Stable to Avoid None anticipated.

Incompatibility (Materials to Avoid) None anticipated.

Hazardous Decomposition Products None anticipated.

Hazardous Polymerization May Occur Will Not Occur Conditions to Avoid None anticipated.

SECTION 5 - HEALTH HAZARDS

Threshold Limit Value Not Applicable

Signs and Symptoms of Exposure 1. Acute Overexposure Under normal use - none.

2. Chronic Overexposure Under normal use - none.

Medical Conditions Generally Aggravated by Exposure None anticipated.

Chemical Listed as Carcinogen or Potential Carcinogen None National Toxicology Program Yes No I.A.R.C. Monographs Yes No OSHA Yes No

OSHA Permissible Exposure Limit Not Applicable ACGIH Threshold Limit Value Not Applicable Other Exposure Limit Used None

Emergency and First Aid Procedures Under normal use, none is required. If the product is misused and ill effect felt, see below.

- 1. Inhalation Remove to fresh air.
2. Eyes Flush with water for at least 15 minutes. If irritation persists, consult physician.
3. Wash exposed area with soap and water. If irritation develops, consult physician.
4. Ingestion Seek medical attention.

SECTION 6 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) Not Applicable

Ventilation Normal Local Exhaust Not Required Mechanical (General) Not Required. Special None Other None

Protective Gloves None is needed under normal use. Eye Protection Under normal use, none is needed.

Other Protective Clothing or Equipment Under normal use, none is needed.

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage Keep away from high heat and open flames.

Other Precautions None

Steps to be Taken in Case Material is Released or Spilled Normal clean up.

Waste Disposal Methods Normal trash disposal.

IMPORTANT

Do not leave any blank spaces. If required information is unavailable, unknown, or does not apply, so indicate.