





**MATERIAL SAFETY DATA SHEET  
REMANUFACTURED HP 51645**

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Wear appropriate protective clothing as described in Section 8. Dike spill and absorb with inert material. Collect into closable containers for proper disposal. Report spill as required by local and federal regulations.

**SECTION 7: HANDLING and STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Protect containers from physical damage. Store in a cool, dry area away from oxidizers and other incompatible materials.

Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Use with adequate ventilation. Remove and launder contaminated clothing before re-use. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities.

**SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION**

INGREDIENTS	CAS#.	EXPOSURE LIMITS
2-Pyrrolidone	616-45-5	None Established
1,4 Butanediol	110-63-4	None Established
Carbon Black	1333-86-4	3.5 mg/m <sup>3</sup> TWA OSHA PEL 3.5 mg/m <sup>3</sup> TWA ACGIH TLV

**EXPOSURE LIMITS:** Use in a well ventilated area.

**PERSONAL PROTECTIVE EQUIPMENT:** Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

**PROTECTIVE CLOTHING:** Use personal protective equipment to minimize exposure to skin and eye.

**SECTION 9: PHYSICAL and CHEMICAL PROPERTIES**

**BOILING POINT (@760 mmHg):** 215°F / 101°C

**SPECIFIC GRAVITY (H20=1):** 1.00 - 1.10

**VAPOR PRESSURE:** 17.5 mmHg

**VAPOR DENSITY (Air=1):** Heavier than air

**SOLUBILITY IN WATER:** Complete

**APPEARANCE AND ODOR:** Black liquid with a mild odor.

**FREEZING POINT:** Not available

**COEFFICIENT of WATER/OIL:** Not available

**EVAPORATION RATE:** < Butyl Acetate

**pH:** 7.5-8.5

**SECTION 10: STABILITY and REACTIVITY**

**STABILITY:** Stable under recommended storage conditions.

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBILITY:** Strong oxidizing agents, reducing agents, acids and strong hydrogen peroxide.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may yield carbon monoxide, carbon dioxide, tetrahydrofuran, and nitrogen oxides.

**HAZARDOUS POLYMERIZATION:** Will not occur.



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**SECTION 11: TOXICOLOGICAL INFORMATION**

**EYE CONTACT:** May cause irritation with redness, pain and blurred vision.

**SKIN CONTACT:** Prolonged contact may cause skin irritation with redness, swelling and cracking. Widespread contact may cause absorption with symptoms similar to inhalation.

**INHALATION:** Vapors or mists may cause upper respiratory tract irritation with coughing, headache, nausea, confusion and giddiness.

**INGESTION:** Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Large amounts may cause narcosis, incoordination and damage the kidneys.

**CHRONIC EFFECTS of OVEREXPOSURE:** Prolonged or repeated exposure may cause dermatitis. 2-pyrrolidone has been found to cause birth defects in studies with laboratory animals. Carbon black has been found to be mutagenic in some test systems.

**CARCINOGENICITY:** Carbon black is listed as "Possibly Carcinogenic to Humans" (Group 2B) by IARC.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Individuals with chronic respiratory and skin diseases may be at increased risk from exposure to this material.

**TOXICOLOGY DATA:** Toxicity values for this chemical are:

2-Pyrrolidone:	Oral rat LD <sub>50</sub> 6,500 mg/kg
1,4 Butanediol:	Oral rat LD <sub>50</sub> 1,525 mg/kg
Carbon Black:	Oral rat LD <sub>50</sub> >15400 mg/kg
	Skin rabbit LD <sub>50</sub> >3 gm/kg

**SECTION 12: ECOLOGICAL INFORMATION**

2-Pyrrolidone:	EC <sub>50</sub> /48 hour daphnia magna >500 mg/l
	LC <sub>50</sub> /48 hour golden orfe >500 mg/l
1,4 Butanediol:	No data available
Carbon Black:	LC <sub>50</sub> /96 hour fathead minnow >100 mg/l
	EC <sub>50</sub> /24 hour daphnia magna >1,000 mg/l

**SECTION 13: DISPOSAL INFORMATION**

**WASTE DISPOSAL METHOD:** Dispose of in accordance with all local, state and federal regulations.

**SECTION 14: TRANSPORTATION INFORMATION**

**DOMESTIC TRANSPORTATION**

**DOT SHIPPING NAME:** Not Regulated

**DOT HAZARD CLASSIFICATION:** Not Regulated

**DOT LABELS REQUIRED (49CFR172.101):** Not Applicable

**UN NUMBER:** None

**INTERNATIONAL TRANSPORTATION**

**IMDG SHIPPING NAME:** Not Regulated

**IMDG CLASS:** Not Regulated

**UN NUMBER:** Not Applicable

**IMDG LABEL:** None



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**SECTION 15: REGULATORY INFORMATION**

**OSHA HAZARD CLASSIFICATION:** Irritant, target organ effects

**EPA SARA 311 HAZARD CLASSIFICATION:** Acute health, chronic health

**SARA TITLE 111 SECTION 313 INFORMATION:** This product contains the following chemicals that are regulated under SARA 313

COMPONENT	CAS #	WT%
None		

**CERCLA HAZARDOUS SUBSTANCE (40CFR 116):** Not applicable

**REPORTABLE QUANTITY:** Not applicable

**CALIFORNIA PROPOSITION 65 INFORMATION:** This product contains carbon black. California lists carbon black (airborne, unbound particles of respirable size) as known to cause cancer. This product contains no unbound carbon black. Therefore no warning is required.

**WHMIS CLASSIFICATION:** Class D - Division 2 - Subdivision B (Toxic material causing other toxic effects)

**SECTION 16: OTHER INFORMATION**

**NFPA Rating:** Health = 1      Fire = 0      Reactivity = 0

**HMIS Rating:** Health = 1      Fire = 0      Reactivity = 1