

**BREWER SCIENCE INC.  
SAFETY DATA SHEET**

This Safety Data Sheet has been prepared to comply with the EC Directive, Canadian WHMIS and the OSHA Hazard Communication Standard.

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION  
AND THE COMPANY/UNDERTAKING**

**Product Name:** Prolift™ 100 Series

**Manufacturer:** Brewer Science, Inc.  
2401 Brewer Drive  
Rolla, MO 65401

**Information Phone Number:** (573) 364-0300

**Fax:** (573) 368-3318

**Email:** msds@brewerscience.com

**Emergency Phone Number:**

Chemtrec Domestic North America: 800-424-9300

Chemtrec International: 703-527-3887

**SDS Date of Preparation:** 9/15/09

**Product Use:** High Temperature Lift-off Layer

**SECTION 2: HAZARDS IDENTIFICATION**

Clear liquid with a fishy odor.

**EMERGENCY OVERVIEW:** Combustible liquid and vapor. Causes eye, skin, and respiratory irritation. May cause harm to the unborn child.

**EU Preparation Classification (1999/45/EC):** Toxic (T) Irritant (Xi) R36/37/38, R61

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS# / EINECS#	%	EU Classification (67/548/EEC)
n-Methyl-2-pyrrolidone (NMP)	872-50-4 / 212-828-1	70-90	T, Xi R36/37/38, R61
Polymer Solids	Proprietary	10-30	No EU Classification or R phrase

See Section 16 for further information on EU Classification.

**SECTION 4: FIRST AID MEASURES**

**Eye:** Rinse thoroughly with water for at least 15 minutes, holding the eye lids open to be sure the material is washed out. Get immediate medical attention.

**Skin:** Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

**Inhalation:** Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. Keep the victim calm and warm. Get immediate medical attention.

**SECTION 5: FIRE FIGHTING MEASURES**

**Extinguishing Media:** Use water fog or spray, foam, carbon dioxide or dry chemical.

**Special Fire Fighting Procedures:** Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

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**Unusual Fire Hazards:** At temperatures above the flash point, explosive vapor-air mixtures may be formed.

**Hazardous Decomposition Products:** Oxides of carbon and nitrogen and unknown materials.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Spill:** Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed. Ventilate area. Cover with an inert absorbent material and collect into an appropriate container for disposal. Report spills and releases as required to appropriate authorities.

#### SECTION 7: HANDLING AND STORAGE

**Handling:** Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

**Storage:** Store in a cool, dry, well-ventilated location away from incompatible materials. Keep containers closed when not in use.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
n-Methyl-2-pyrrolidone	10 ppm skin (AIHA WEEL) 20 ppm DFG-MAK skin (as vapor) 25 ppm TWA, 75 ppm STEL UK WEL
Polymer Solids	None Established

**Ventilation:** Use with adequate general or local exhaust ventilation to maintain exposure levels below the recommended occupational exposure limits.

**Respiratory Protection:** If needed, an approved respirator with organic vapor cartridges may be used. For higher exposure, a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

**Skin Protection:** Impervious gloves are recommended. Based on available test data, butyl rubber gloves are suggested.

**Eye Protection:** Chemical safety goggles recommended.

**Other Protective Equipment:** Impervious clothing is recommended to prevent skin contact and contamination of personal clothing. An eye wash facility and safety shower should be available in the work area.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Clear liquid with a fishy odor.

**pH:** Not available

**Boiling Point:** 202°C

**Vapor Pressure:** 0.5 mmHg @ 25°C

**Vapor Density:** 3.4

**Flash Point:** 86°C (186.8°F)

**Specific Gravity:** Not available

**Melting Point:** Not Applicable

**Water Solubility:** Partially Soluble

**Evaporation Rate:** Not available

**Flammable Limits:** LEL: 1.3 vol %

UEL: 9.5 vol %

#### SECTION 10: STABILITY AND REACTIVITY

**Stability:**      **Stable:** X      **Unstable:**

**Incompatibility/Conditions to Avoid:** Strong oxidizing agents and strong acids. Keep away from heat, sparks, flames and other sources of ignition.

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**Hazardous Decomposition Products:** Combustion will produce oxides of carbon and nitrogen and unknown materials.

**Hazardous Polymerization:** May Occur: Will not occur: X

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### Potential Health Effects:

**Eye:** May cause moderate irritation with pain, redness and blurred vision.

**Skin:** May cause redness, irritation, swelling, cracking and dryness. N-methyl-2-pyrrolidone may be absorbed through the skin causing effects similar to those described under inhalation.

**Inhalation:** Inhalation of vapors, mists or aerosols may cause mucous membrane and respiratory irritation and abdominal pain.

**Ingestion:** Swallowing may cause gastrointestinal irritation, abdominal pain, nausea, vomiting and diarrhea.

**Chronic Hazards:** Human experience has demonstrated severe dermatitis from prolonged/repeated skin exposure to n-methyl-2-pyrrolidone. N-methyl-2-pyrrolidone has been reported to cause adverse reproductive effects in laboratory animals. N-Methyl-2-Pyrrolidone may cause harm to the unborn child.

**Carcinogen Status:** None of the components of this product are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU Dangerous Substances Directive.

**Medical Conditions Aggravated by Exposure:** Pre-existing skin diseases.

##### Acute Toxicity Values:

n-Methyl-2-pyrrolidone: Oral rat LD50 - 3914 mg/kg; Skin rabbit LD50 - 8 gm/kg

Polymer Solids: No toxicity data is available

#### SECTION 12: ECOLOGICAL INFORMATION

This product has not been tested as a whole. The following ecotoxicity data is available for the components:

n-Methyl-2-pyrrolidone: LC50/96 hour values for fish are greater than 100 mg/L.

#### SECTION 13: DISPOSAL INFORMATION

Dispose in accordance with all local, state and federal regulations.

#### SECTION 14: TRANSPORT INFORMATION

**DOT Shipping Name:** Combustible Liquid, n.o.s. (Excepted from HazMat in Non-Bulk Packaging)

ERG #128

**DOT Hazard Class:** Combustible Liquid

**UN Number:** NA1993

**DOT Labels Required (49CFR172.101):** None

**Hazardous Substance (49CFR172.101):** None

**Reportable Quantity:** N/A

**IATA Shipping Name:** Not Regulated

**IATA Hazard Class:** None

**UN Number:** N/A

**IATA Hazard Labels Required:** None

#### SECTION 15: REGULATORY INFORMATION

##### U.S. FEDERAL REGULATIONS:

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**CERCLA 103 Reportable Quantity:** This product is not subject to reporting under CERCLA. Some states have more stringent requirements. Report all spills in accordance with local, state and federal regulations.

**SARA TITLE III:**

**Hazard Category for Section 311/312:** Acute Health, Chronic Health, Fire Hazard

**Section 313 Toxic Chemicals:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: n-Methyl-2-pyrrolidone CAS#872-50-4 70-90%

**Section 302 Extremely Hazardous Substances (TPQ):** None


**EPA Toxic Substances Control Act (TSCA) Status:** All of the components of this product are listed on the TSCA inventory.

**STATE REGULATIONS:**

**California Proposition 65:** This product contains the following substances known to the State of California to cause developmental toxicity (birth defects): n-Methyl-2-pyrrolidone.

**INTERNATIONAL REGULATIONS:**

**European Community Labeling :** Contains n-Methyl-2-pyrrolidone

	 Toxic	R36/37/38 Irritating to eyes, respiratory tract, and skin. R61 May cause harm to the unborn child. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S53 Avoid exposure – Obtain special instructions before use. S60 This material and its container must be disposed of as hazardous waste.
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**SECTION 16: OTHER INFORMATION**

**HMIS Ratings:** Health - 2                      Flammability - 2                      Reactivity - 0  
**NFPA Ratings:** Health - 2                      Flammability - 2                      Reactivity - 0

**SDS Revision History:**

9/15/09: New SDS.

10/15/09: Updated EU Classification in Sections 2, 3, and 15. Updated exposure limits. Updated graphic. Updated physical information.

**EU Classes and Risk Phrases for Reference (See Sections 2 and 3):**

T Toxic

Xi Irritant

R36/37/38 Irritating to eyes, respiratory tract, and skin.

R61 May cause harm to the unborn child.

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This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Brewer Science, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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