

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME: BSL 712**

PART NUMBER:

GENERAL USE: Fluorescent dye for refrigerant leak detection

PRODUCT DESCRIPTION: Dark amber liquid, characteristic odor



MANUFACTURER'S NAME

**Bright Solutions International, LLC**

DATE PREPARED: August 12, 2009

SUPERSEDES: March 18, 2008

EMAIL ADDRESS: MSDS@brightsol.com

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ADDRESS (NUMBER, STREET, P.O. BOX)

1738 Mapelawn Dr.

TELEPHONE NUMBER FOR INFORMATION

(248) 614-9063

(CITY, STATE AND ZIP CODE)

Troy, MI 48084

COUNTRY

USA

EMERGENCY TELEPHONE NUMBER

ChemTel Inc. 1- (800) 255-3924 Intl. + 01 (813) 248-0585

## SECTION 2 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Will support combustion. Contact with to eyes, respiratory system and skin will cause irritation. May cause harm to the unborn child. Hazard symbols for this product: T. Risk Phrases - R61, 36/37/38

### POTENTIAL HEALTH EFFECTS

INHALATION: None expected, however, certain individuals may be sensitized and experience minor nausea or headaches. Inhalation of airborne mist could be damaging to the lungs.

SKIN: None expected, however, prolonged contact may cause irritation.

EYES: This product is an eye irritant. Contact with the eyes will cause irritation.

INGESTION: May cause gastric distress, vomiting and diarrhea. Any material aspirated during vomiting may cause lung injury.

CARCINOGENICITY

NTP? No

IARC MONOGRAPHS? No

OSHA REGULATED? No

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% (by weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES Full Text Section 16
1-Methyl-2-pyrrolidone (a,b)	30 - 60	872-50-4	212-828-1	T	R-61. 36/37/38
Proprietary Dye (c)	1 - 5	Not specified	Not specified	NC	Not classified

(a) See Section 15

(b) California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986, chemicals known to the state to cause cancer or reproductive toxicity. A person in the course of doing business must warn others who may consume, come into contact with, or otherwise be exposed to this chemical.

(c) The specific product is not identified due to "Trade Secret" status. In emergency situations further information may be obtained by the on - duty physician calling the emergency information number listed above. Reference 29 CFR 1910.1200 and / or 40 CFR 350.

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**SECTION 4 - FIRST AID MEASURES**

**INHALATION:** Remove affected person to fresh air; if symptoms persist seek medical attention.

**SKIN:** Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

**EYES:** Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

**INGESTION:** Give two glasses of water for dilution; DO NOT induce vomiting; seek medical attention; never give anything by mouth to an unconscious person.

**SECTION 5 - FIRE FIGHTING MEASURES**

**GENERAL HAZARDS:** Product will support combustion. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

**EXTINGUISHING MEDIA**  
Carbon dioxide, water fog, dry chemical, chemical foam

**FIRE FIGHTING PROCEDURES**  
Self - contained respiratory equipment; cool containers to prevent pressure buildup and possible explosion when exposed to extreme heat.  
Caution - material will support combustion!

**UNUSUAL FIRE AND EXPLOSION HAZARDS**  
Closed containers can explode due to buildup of pressure when exposed to extreme heat.

**HAZARDOUS COMBUSTION PRODUCTS**  
Smoke, fumes, oxides of carbon

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** CAUTION - WILL SUPPORT COMBUSTION. Do not wash to sanitary sewer. All spills - confine spill, soak up with approved absorbent, shovel product into approved container for disposal. Flush area with water, recover flush for proper disposal.

**SECTION 7 - HANDLING AND STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures, open flames. CAUTION - This material will support combustion. Keep this and other chemicals out of reach of children.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

HAZARDOUS COMPONENTS	NIOSH				ACGIH			
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
1-Methyl-2-pyrrolidone (a,b)	*100							
Proprietary Dye (c)	not established				not established			

(\*) The ACGIH Threshold Limit Value (TLV) has not been established nor has OSHA established the Permissible Exposure Limit (PEL) for this product, therefore the limits described have been established as guidelines by the manufacturer.

(a) See Section 15

**PERSONAL PROTECTION:**

**RESPIRATORY PROTECTION:** None required; however, if misting occurs, NIOSH approved respirator capable of removing particulate from air must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

**PROTECTIVE GLOVES:** Recommended for general protection

**EYE PROTECTION:** Safety goggles with side shields Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Safety eyebath nearby

**WORK / HYGIENIC PRACTICES:** Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR Dark amber liquid, characteristic odor	VAPOR PRESSURE < 0.1 mm Hg @ 20° C
pH Not determined	SPECIFIC GRAVITY (WATER = 1) 1.054
BOILING POINT / BOILING RANGE 203° F (95° C)	SOLUBILITY IN WATER Miscible
FLASH POINT > 200° F (> 93.3° C)	VISCOSITY Similar to water
FLAMMABLE LIMITS LEL: Not applicable UEL: Not applicable	VAPOR DENSITY (AIR = 1) 3.04
AUTOIGNITION TEMPERATURE Not determined	EVAPORATION RATE (WATER = 1) < 1

**SECTION 10 - STABILITY AND REACTIVITY**

STABILITY UNSTABLE: STABLE: X	CONDITIONS TO AVOID: Extreme temperatures, open flames
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.	
HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X	CONDITIONS TO AVOID: None

**SECTION 11 - TOXICOLOGICAL INFORMATION**

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
1-Methyl-2-pyrrolidone (a,b)	872-50-4 212-828-1	3914 mg / kg Oral - rat	> 5.1 mg / l / 4H Inhalation - rabbit
Proprietary Dye (c)	Not specified Not specified	> 5000 mg / kg Oral - rat	Not established
(a) See Section 15			

**SECTION 12 - ECOLOGICAL INFORMATION**

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. This product may produce concentrated hazardous vapors or fumes in a disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations for ignitable materials. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway. According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used.

**SECTION 14 - TRANSPORT INFORMATION**

PROPER SHIPPING NAME: Non - Hazardous for Transport	IATA HAZARD CLASS / Packaging Group: Not regulated
DOT HAZARD CLASS / Packaging Group: Not regulated	IMDG HAZARD CLASS: Not regulated
REFERENCE: Not Applicable	RID / ADR Dangerous Goods Code: Not regulated
UN / NA IDENTIFICATION NUMBER: None	UN TDG Class / Packaging Group: Not regulated
LABEL: None Required	Hazard Identification Number (HIN): None
HAZARD SYMBOLS: None	

Note: Transportation information provided is for reference only. Client is urged to consult 49 CFR 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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**SECTION 15 - REGULATORY INFORMATION**

**TSCA (USA - Toxic Substance Control Act)**

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume or Polymer Exemption has been granted in accordance with 40 CFR 723.50.

**SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)**

311/312 Hazard Categories  
Acute health, eye irritant, skin irritant

313 Reportable Ingredients:

(a) Indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

**CERCLA (USA - Comprehensive Response Compensation and Liability Act)**

None

**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

**CPR (Canadian Controlled Products Regulations)**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: D2B

**IDL (Canadian Ingredient Disclosure List)**

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

**DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)**

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

**EINECS (European Inventory of Existing Commercial Chemical Substances)**

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

**WGK Water Quality Index: 1**

**VbK Index: A III**

**RISK PHRASES:**

R61 May cause harm to the unborn child.  
R36/37/38 Irritating to eyes, respiratory system and skin.

**SYMBOL(S) REQUIRED FOR LABEL**

Toxic



**SAFETY PHRASES:**

S23 Do not breathe vapour.  
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.  
S28 After contact with skin, wash immediately with plenty of soap and water.

**SECTION 16 - OTHER INFORMATION**

**Notes & full R-Phrase text**

R61 May cause harm to the unborn child.  
R36/37/38 Irritating to eyes, respiratory system and skin.

**HMIS HAZARD RATINGS**

HEALTH	2*	* = Chronic Health Hazard	2 = MODERATE
FLAMMABILITY	1	0 = INSIGNIFICANT	3 = HIGH
PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME

PERSONAL PROTECTIVE EQUIPMENT B Safety Glasses, Gloves

**REVISION SUMMARY:**

This MSDS has been revised in the following sections:  
Sections 2, 3, 15, 16

**MSDS Prepared By:**

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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.