MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL IDENTIFICATION AND USE

Material Name Identifier:

R-1 Black Ink

Supplier Name: Sterling Marking Products Inc.
Street Address: 349 Ridout St. N.,
City and Province: London, Ontario
Postal Code: N6A 2N8

Telephone Numbers: (519) 434-5785, (800) 265-5957
Fax Number: (519) 434-9516, (800) 667-6600
Webpage: http://www.sterling.ca

Emergency Telephone Number: CANUTEC (613) 996-6666; Cellular *666

Material Use: **Ink**

TDG Shipping Information:

PRINTING INK, flammable, UN1210
Class: 3.3 - Flammable Liquids with Flash Point 23 C to 61 C
PG: III - Relatively Minor Danger

WHMIS Classification:
Class B, Division 3 - Combustible Liquids
Class D, Division 2B - Skin/Eye Irritant

IATA Shipping (Air):
PRINTING INK, flammable
Packaging Instruction for Limited Quantity: Y344
Maximum Net Quantity (per outer package): 10L
Refer to Pkg. Inst. No. for inner packaging type and maximum quantity per inner package. DGR – 54th edition

SECTION II - HAZARDOUS INGREDIENTS

Component	CAS Registry	Toxicology	Concentration % (w/w)
Diacetone alcohol	**123-42-2**	ACGIH: Short term value 238 mg/m^3 L_D50: 4000mg/kg (oral, rat) L_C50: 1000ppm (inhalation, rat)	90-100%
Diethylene glycol	**111-46-6**	TLV: Not available L_D50: 12565mg/kg (oral, rat) L_C50: Not available	2.5-10%

Note: All ingredients are listed on the Domestic Substances List (DSL) and the Toxic Substances Control Act (TSCA) list.

SECTION III - PHYSICAL DATA

Physical State: Liquid
Vapour Pressure @ 20°C: 1.1 hPa
Colour: Black or Red
Solvent Content (Organic Solvents): 95.0%
Solids Content: 5.0%
Ignition Temperature: 260°C
Boiling Point (°C): 150
Odour: Like ketone
Solubility in Water (20 °C): Partially soluble in water.
Flash Point (°C): 56

SECTION IV - FIRE AND EXPLOSION DATA

Flammability: Combustible
Flash Point (°C TCC): 56

LEL (% vol) lowest value of components: 1.4
UEL (% vol) highest value of components: 8.1
Hazardous Combustion Products: Oxides of carbon, oxides of nitrogen, and other organic combustion products.

Means of Extinction Fire: Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use media suitable for surrounding fire. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

Special Fire-Fighting Procedures: Clear area of unprotected personnel. Firefighters should wear NIOSH-approved, self-contained breathing apparatus (SCBA). Use water spray to cool fire-exposed surfaces. Also, use water to flush spilled material away from source. Vapours are harmful; stay upwind of a fire to minimize breathing of vapours, gases, fumes, or decomposition products being generated.

SECTION V - REACTIVITY DATA

Stability: This product is stable.
Incompatibility: Strong oxidizing agents. Strong acids. Strong bases. Alkali metals. Hallogens.
Hazardous Decomposition Products: No hazardous decomposition products are known.

SECTION VI - TOXICOLOGICAL PROPERTIES

Routes of Entry: Eye, Skin, Inhalation, Ingestion
Effects of Acute Exposure:
Effects of Acute Exposure:
Eye: May irritate eyes.
Skin: May cause skin irritation.
Inhalation: Causes respiratory tract irritation
Ingestion: May be harmful if swallowed.

Effects of Chronic Exposure:
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Repeated and prolonged overexposure, and/or individual sensitivity, may increase the potential for, and degree of, adverse health effects.

Diethylene glycol is a nephrotoxin (a cytotoxin that is destructive to kidney cells).
Irritancy: Hazardous by WHMIS criteria
Respiratory Tract Sensitization: Insufficient data available.
Carcinogenicity: Not hazardous by WHMIS criteria.
Synergistic Materials: None known.
Reproductive Effects: Insufficient data available.
Teratogenicity: Insufficient data available.
Mutagenicity: Insufficient data available.

SECTION VII - PREVENTATIVE MEASURES

Gloves: Solvent impermeable gloves are required for repeated or prolonged contact. Wash hands before breaks and at the end of work.

Eye Protection: Wear tightly sealed safety goggles.

Respiratory Protection: In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.

Other Protective Equipment Recommended: None required.

Engineering Controls: Use general dilution and local exhaust in sufficient volume, and pattern to keep concentrations of hazardous ingredients listed in Section II below the lowest exposure limit stated.

Leak and Spill Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas; run-off from fire control or dilution water may cause pollution. A vapour suppressing foam may be used to reduce vapours. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean, non-sparking tools to collect absorbed material.

Waste Disposal: Review federal, provincial and local government requirements prior to disposal. Use a licensed waste treatment facility or reclaimer.

Storage Requirements: Store in a tightly closed container. Store away from incompatible materials. Store in a cool, dry, well-ventilated area. Ensure storage area has adequate ventilation, and no source of open flame or sparks. Limit quantity of the material in storage. Ensure all bottles are properly labeled.

Special Precautions: Ground all equipment to prevent static discharge. Keep containers away from heat, sparks, and open flame. Wash thoroughly with soap and water after handling material.

SECTION VIII - First Aid

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Eye: Immediately flush eyes with a directed stream of water for at least 20 minutes, while holding eyelids open. If irritation or redness develops or persists, get medical attention.

Skin: Flush affected areas with large amounts of water, remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation or redness develops or persists, get medical attention.

Inhalation: Remove victim to fresh air. If breathing difficulties develop, administer oxygen and get medical attention. If victim is not breathing, administer artificial respiration and get medical attention.

Ingestion: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs (Aspiration pneumonitis can be fatal). If victim conscious and alert, give victim lukewarm water. GET IMMEDIATE MEDICAL ATTENTION.

SECTION IX - Preparation and Additional Information

Prepared by: Sterling Marking Products Inc.
Quality Planning and Engineering Department
349 Ridout St., N.
London, Ontario N6A 2N8

Supersedes: April 24, 2012
Updated: April 14, 2015

Expires: **14-Apr-2018**