

Part Number(s): 277, 277-2, 277-3, 277-4, 277T

## MATERIAL SAFETY DATA SHEET

### SECTION I - MATERIAL IDENTIFICATION AND USE

Material Name Identifier:

**850 Ink (Black, Blue, Green, Red, Violet, White,)**

**Other Names: C-917 Ink, MM-712**

Supplier Name: Sterling Marking Products Inc.      Webpage: <http://www.sterling.ca>  
 Street Address: 349 Ridout St. N.,      P.O. Box 5055  
 City and Province: London, Ontario      Postal Code: N6A 5S4  
 Telephone Numbers: (519) 434-5785, (800) 265-5957      Fax Number: (519) 434-9516, (800) 667-6600  
 Emergency Telephone Number: Poison Control Centre \_\_\_\_\_  
 Material Use: **Ink**

### **TDG Shipping Information:**

**Printing ink UN1210 Class: 3 PG: II**

#### **WHMIS Classification:**

Class B, Division 2 - Flammable Liquids  
 Class D, Division 2B - Skin/Eye Irritant

#### **IATA Shipping (Air):**

Printing ink  
**Packaging Instruction for Limited Quantity:** Y341  
**Maximum Net Quantity** (per outer package): 1L  
 Refer to Pkg. Inst. No. for inner packaging type and maximum quantity per inner package. DGR – 54<sup>th</sup> edition

### SECTION IIa - HAZARDOUS INGREDIENTS

| Component   | CAS Registry | Toxicology   | Concentration % (w/w) |
|-------------|--------------|--|-----------------------|
| Ethanol     | 64-17-5      | ACGIH TLV-TWA 1000 ppm<br>LD50: 3945mg/kg (oral, rat)<br>LC50: 20,000ppm/10H (inhalation, rat)             | 35-50                 |
| Isopropanol | 67-63-0      | ACGIH TLV-TWA 200 ppm; STEL 400 ppm<br>LD50: 4710mg/kg (oral, rat)<br>LC50: 16,000ppm/4H (inhalation, rat) | 5-15                  |

### SECTION III - PHYSICAL DATA

|   |   |
|---|---|
| <b>Physical State:</b> Liquid<br><b>Specific Gravity:</b> <1<br><b>Colour:</b> Various<br><b>Vapour Pressure</b> (mmHg): Not Established<br><b>Vapour Density</b> (Air = 1): >1 | <b>Evaporation Rate</b> (n-Butyl acetate = 1): >1<br><b>Boiling Point</b> (°C): Not established<br><b>Odour:</b> Alcohol<br><b>Solubility in Water</b> (20 °C): Partial<br><b>Flash Point</b> (°C): 18.33 |
|---|---|

### SECTION IV - FIRE AND EXPLOSION DATA

**Flammability:** Flammable

**Flash Point** (°C TCC): 18.33

LEL (% vol) lowest value of components: Not Established

UEL (% vol) highest value of components: Not Established

**Hazardous Combustion Products:** Oxides of carbon, oxides of nitrogen, hydrogen cyanide and other organic combustion products.

**Potential Hazards:** HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapour explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated.

**Means of Extinction of Small Fire:** CAUTION: This product has a low flash point: Use of water spray when fighting fire may be inefficient. Small Fires: 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.

**Unusual Fire & Explosion Hazards:** Containers exposed to intense heat from fire must be cooled to prevent vapour pressure build-up that may result in container rupture. Cool containers exposed directly to flames with large quantities of water as needed to prevent weakening of container itself. Never use a welding or cutting torch on or near container.

**Empty Container Warning:** "Empty" containers contain residues (liquid, solid, and/or vapour) that can be dangerous. DO NOT pressurize, cut, weld, braze, grind, drill, solder, or expose containers to heat, sparks, open flame. They may explode and cause injury and/or death. DO NOT attempt to clean drums. Residues are difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioned. Dispose of all containers in an environmentally safe way and in accordance with governmental regulations. For work on tasks, refer to OSHA regulations ANSIZ49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding, or other operations.

## SECTION V - REACTIVITY DATA

**Stability:** This product is stable under normal storage conditions. However, may form peroxides of unknown stability. Rate of deterioration increases with increasing temperature and time. Avoid exposure to heat. Use oldest material first.

**Incompatibility:** Amines, alkalis, strong acids, oxidizers. Ethanol reacts with aluminum at high temperatures.

**Hazardous Decomposition Products:** Oxides of carbon, oxides of nitrogen, hydrogen cyanide and other organic combustion products.

**Conditions to Avoid:** Elevated temperatures. Vapours can form flammable mixtures at ordinary temperatures. Static electricity may accumulate and create a fire ignition hazard. Move container from fire area if possible. See also Section VII – Preventative Measures for "Storage Requirements" and "Special Precautions". Vapours are heavier than air and may travel a considerable distance where they may linger and/or find an ignition source and flash back. Stay upwind; keep out of low areas.

## SECTION VI - TOXICOLOGICAL PROPERTIES

**Routes of Entry:** Eye, Skin, Skin Absorption, Inhalation, Ingestion

**Effects of Acute Exposure:**

**Eye:** Will cause eye irritation.

**Skin:** Local irritation may occur. Prolonged or repeated exposure may cause skin irritation and defatting of skin.

**Skin Absorption:** Skin absorption of very large doses may cause drowsiness. Prolonged skin contact may be harmful.

**Inhalation:** Nausea, headache, drowsiness, irritation can occur at or above ACGIH (TLV). The odour is objectionable; higher levels product eye, nose and throat irritation, headache and nausea can also occur.

**Ingestion:** Nausea and drowsiness may occur. Large dose ingestion can be harmful. This product contains 5-10% Isopropanol [CAS #67-63-0]. Ingestion of as little as 10mL of Isopropanol may cause serious injury, while ingestion of 100mL can be fatal. Persons on Disulfiram (Antabuse R) therapy should be aware that the ethyl alcohol in this product is hazardous to them, just as alcohol from any source. Disulfiram reactions may follow ingestion of small amounts of alcohol and have also been described from skin contact. Reports of animal test studies, on one or more of the individual ingredients, have shown possible effects to the liver and kidneys. The relevance of these effects to man is unknown.

**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.

**Irritancy:** Hazardous by WHMIS criteria

**Respiratory Tract Sensitization:** Insufficient data available

**Carcinogenicity:** Not hazardous by WHMIS criteria.

**Synergistic Materials:** Insufficient data available

**Reproductive Effects:** Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects, which together constitute the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders and a small -sized head.

**Teratogenicity:** Insufficient data available

**Mutagenicity:** Insufficient data available

## SECTION VII - PREVENTATIVE MEASURES

**Gloves:** Solvent impermeable gloves are required for repeated or prolonged contact.

**Eye Protection:** Wear safety glasses meeting the specification of ANSI Z87.1 where no contact with the eye is anticipated.

Chemical safety goggles meeting the specifications of ANSI Z87.1 should be worn whenever there is a possibility of splashing or other contact with the eyes.

**Respiratory Protection:** Proper selection of respiratory protection depends upon many factors, including duration and level of exposure and conditions of use. In general, exposure to organic chemicals, such as those contained in this product, may not require the use of respiratory protection, if used in a well-ventilated area. In areas of restricted ventilation, a NIOSH approved organic vapour respirator may be required. Under certain conditions, such as spraying, a mechanical pre-filter may also be required. In confined areas, or in high exposure situations, a NIOSH/MSHA approved air-supplied respirator may be required. If the TLV's listed in Section II are exceeded, use a properly fitted NIOSH/MSHA approved respirator with an appropriate protection factor. Use material only with adequate ventilation to prevent exceeding the recommended exposure limit or a build-up of explosive concentrations in the air. Use explosion proof equipment. No smoking or open lights. Air-dry contaminated clothing in a well ventilated area before laundering.

**Other Protective Equipment Recommended:** Safety shower and eye wash fountain in the immediate work area.

**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. Fumes emitted while baking this product must be properly vented.

**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:** Seal containers when not in use. Do not store near heat and open flame. To maintain product quality, store in cool, dark, dry areas. Potential peroxide former. Periodically test for peroxide formation on long-term storage. Minimize exposure to air. Store away from heat and light. Keep from contact with oxidizing materials. Since emptied containers retain product residue, follow label warnings even after container is emptied. Conditions to avoid: Rate of deterioration increases with increasing temperature and time. Avoid exposure to heat. Use oldest material first.

**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 15 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 5S4

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Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond the control of the supplier, it is assumed that user of this material has been fully trained according to the mandatory requirements of WHMIS. If user requires independent information on ingredients in this or any other material, we recommend contact with the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton, Ontario (1-800-263-8276) or CSST in Montreal, Quebec (514-873-3990).