

MSDS Reference Number(s): RS100, RS100-2, RS100-4, RS100-4, RS100-8, RS100-16, RS100-32, HRS-100, MM-100, MM-1000

**MATERIAL SAFETY DATA SHEET**

**SECTION I - MATERIAL IDENTIFICATION AND USE**

**Material Name Identifier:**

**RS-100 Ink (Orange)**

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:**

**Not regulated by ground, unless >450L, then: Printing Ink, UN1210, Class: 3 - Flammable Liquid ; PG: III - Relatively Minor Danger**

**Emergency Response Guide Book No.: 129**

**WHMIS Classification:**

Class B, Division 3 - Combustible Liquids  
 Class D, Division 1A - Inhalation Acute (Diacetone alcohol)  
 Class D, Division 2B - Skin/Eye Irritant

**IATA Shipping (Air):**

Printing Ink  
**Packaging Instruction for Limited Quantity: Y309**  
**Maximum Net Quantity** (per outer package): 10L  
 Refer to Pkg. Inst. No. for inner packaging type and maximum quantity per inner package.

**SECTION II - HAZARDOUS INGREDIENTS**

Component	CAS Registry	Toxicology	Concentration % (w/w)
Ethylene glycol	107-21-1	ACGIH TLV-CL 100 mg/m3 (aerosol) L <sub>D</sub> 50: 5500 mg/kg (oral, mouse) L <sub>C</sub> 50: Not available	30-60
Diacetone alcohol	123-42-2	ACGIH TLV-TWA 50 ppm L <sub>D</sub> 50: 2520 mg/kg (oral, rat) L <sub>C</sub> 50: Not Available	15-40
C.I. Solvent Yellow 79	85455-32-9	TLV: Not available L <sub>D</sub> 50: >10,000mg/kg (oral,rat) L <sub>C</sub> 50: Not available	1-5

**SECTION III - PHYSICAL DATA**

Physical State: Liquid	% Volatile by Volume: 85-95
Specific Gravity: ~1.0	Boiling Point (°C): 128
Colour: <b>Orange</b>	Odour: Strong
Viscosity: As water	Solubility in Water (20 °C): Soluble
Clarity: Opaque	Flash Point (°C): 60

**SECTION IV - FIRE AND EXPLOSION DATA**

Flammability: Combustible

Flash Point (°C TCC): 60

LEL (% vol) lowest value of components: 1.8

UEL (% vol) highest value of components: 6.9

Hazardous Combustion Products: Oxides of carbon. Fire will produce irritating, corrosive and/or toxic gases.

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. Many liquids are lighter than water.

Means of Extinction of Small Fire: **CAUTION:** This product has a low flash point: Use of water spray when fighting fire may be inefficient. Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Do not use dry chemical extinguishers to control fires involving nitromethane or nitroethane.

Means of Extinction of Large Fire: Water spray, fog or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do it without risk.

Fire Involving Tank or Rail Car: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discolouration of tank. ALWAYS stay away from tanks engulfed in fire.

Means of Extinction of Massive Fire: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Evacuation Procedure: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 metres (1/2 mile) in all directions; also, consider initial evacuation for 800 metres (1/2 mile) in all directions. Fire-Fighters should wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

**SECTION V - REACTIVITY DATA**

Stability: Stable

Incompatibility: Avoid contact with strong caustics as they can cause decomposition. Strong oxidizing agents can increase risk of fire and explosion. Strong acids can increase temperature and pressure within a closed container. Contact with chromium trioxide and potassium permanganate should also be avoided. Keep container tightly closed to avoid contact with air; material is hygroscopic (i.e. it absorbs moisture from the air).

Hazardous Decomposition Products: Oxides of carbon. Fire will produce irritating, corrosive and/or toxic gases.

**SECTION VI - TOXICOLOGICAL PROPERTIES**

Route of Entry: Eye, Skin, Inhalation, Ingestion

Effects of Acute Exposure:

**Eye:** Contact can cause moderate to high irritation.

**Skin:** Acts as a mild irritant on the skin.

**Inhalation:** May cause nose, throat, and respiratory tract irritation, coughing and headaches; higher levels result in dizziness, nausea, and depression of the central nervous system (CNS). At extremely high levels (i.e. >1000ppm), effects range from unconsciousness, respiratory depression, and even death.

**Ingestion:** May cause vomiting, headaches, abdominal pain, weakness, as well as drunkenness, dizziness, stupor, convulsions and coma. Death may occur from respiratory arrest or cardiovascular collapse.

**Effects of Chronic Exposure:**

**Skin:** Repeated or prolonged contact may cause drying, cracking, irritation and dermatitis.

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.

Pregnant women and persons with pre-existing health disorders should consult their physician before using this product.

Persons with pre-existing skin or lung disorders may be susceptible to the effects of this material. 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:** No information available

**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.

**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.

**Other Protective Equipment:** 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.
- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapour; but, may not prevent ignition in closed spaces.
- EVACUATION: Consider initial downwind evacuation for at least 300 metres (1000 feet).

**Waste Disposal:** Review federal, provincial and local government requirements prior to disposal.

**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.

**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 with water for 15 minutes. Get immediate medical attention

**Skin:** Flush with water. Call a doctor if irritation develops. Completely decontaminate clothing, shoes and leather goods before reusing or discarding.

**Inhalation:** Remove to fresh air. If breathing has stopped, trained personnel should begin artificial respiration or CPR immediately. If breathing is difficult, trained personnel should administer oxygen. Get immediate medical attention if warranted.

**Ingestion:** Do not induce vomiting. Rinse mouth with water, then drink one glass of water. Get immediate medical attention. Never give anything by mouth if victim is unconscious, is rapidly losing consciousness or is convulsing.

**SECTION IX - PREPARATION AND ADDITIONAL INFORMATION**

**Prepared by:** Sterling Marking Products Inc.  
Quality Planning and Engineering Department  
349 Ridout St., N.  
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Supercedes: May 22, 2008  
Revision date: October 14, 2010

**Expires: 14 Oct 2013**

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).