

Part Number(s): pp219

**MATERIAL SAFETY DATA SHEET**

**SECTION I - MATERIAL IDENTIFICATION AND USE**

**Material Name Identifier:**

**BH Hardener**

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>  
 E-Mail: [sales@sterling.ca](mailto:sales@sterling.ca)

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

Material Use: **Hardener**

**TDG Shipping Information:**

**UN1263 PAINT RELATED MATERIAL**  
**Class 3 Flammable Material**  
**PG: III**

**WHMIS Classification:**

Class B, Division 2 – Flammable Liquid  
 Class D, Division 2A – Very Chronically Toxic  
 Class D, Division 2B – Skin/eye Irritant

**IATA Shipping (Air):**

Paint Related Material  
**Packaging Instruction for Limited Quantity: Y344**  
**Maximum Net Quantity** (per outer package): 10 L  
 Refer to Pkg. Inst. No. for inner packaging type and maximum quantity per inner package. DGR – 54<sup>th</sup> edition

**SECTION II - HAZARDOUS INGREDIENTS**

Component	CAS Registry	Toxicology	Concentration % (w/w)
Toluene Diisocyanate	<b>26741-62-5</b>	ACGIH TLV-TWA 0.005 ppm; STEL 0.02 ppm (sen) LD50: 4130 mg/kg (oral, rat) LC50: 9.7ppm /4H (inhalation, mouse)	<0.5
N-Butyl Acetate	<b>123-86-4</b>	ACGIH TLV-TWA 150 ppm; TLV-STEL 200 ppm LD50: 10768 mg/kg (oral, rat) LC50: 390 ppm/4H (inhalation, rat)	30-35

**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  
**Specific Gravity:** 1.16  
**Colour:** light yellow  
**Viscosity:** N/Av  
**Clarity:** Transparent  
**Vapour Pressure**(20 °C): 13 mm Hg

**% Volatile:** 33  
**Boiling Point** (°C): 124  
**Odour:** organic solvents  
**Solubility in Water** (20 °C): no  
**Flash Point** (°C): 31  
**Vapour Density** (Air =1) : >1



**SECTION IV - FIRE AND EXPLOSION DATA**

**Flammability:** Flammable

**Flash Point** (°C TCC): 31

LEL (% vol) lowest value of components: 1.2

UEL (% vol) highest value of components: 7.5

**Hazardous Combustion Products:** Oxides of carbon, oxides of nitrogen, 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 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. 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:** Stable

**Incompatibility:** Avoid peroxides and other strong oxidizing materials

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, smoke, oxides of nitrogen

**SECTION VI - TOXICOLOGICAL PROPERTIES**

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

Effects of Acute Exposure:

**Eye:** Eye contact causes irritation, redness, tearing, and blurred vision. Eye contact with liquid or vapor causes severe irritation, redness, tearing, and blurred vision.

**Skin:** Prolonged skin contact may lead to extraction of natural oils with resultant dry skin, cracking, irritation and dermatitis.

**Inhalation:** Excessive vapor concentration in air, especially in confined spaces, may cause asphyxiation. Excessive inhalation of vapors can cause nasal, throat and respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

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

**Notice:** Intentional misuse by deliberately concentrating and inhaling the contents maybe harmful or fatal. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Effects of Chronic Exposure:

Health studies have shown that many solvents pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids and vapors should be minimized. Prolonged or continuous inhalation of vapors may result in delayed lung damage. Repeated or prolonged inhalation of vapor may cause liver and kidney damage. Repeated inhalation of vapor in high concentration can change the blood picture.

## SECTION VII - PREVENTATIVE MEASURES

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

**Eye Protection:** Wear safety glasses where contact with the eye is anticipated. Chemical safety goggles 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.

**Other Protective Equipment Recommended:** Eye wash station in the work area. Use chemical resistant clothing. Liquid may penetrate shoes and leather causing a delayed irritation.

**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:** Take up with liquid-binding materials, such as vermiculite.

**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 all bottles are properly labeled. Do not smoke near materials.

**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 15 minutes, while holding eyelids open. 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). GET IMMEDIATE MEDICAL ATTENTION.

## SECTION IX - PREPARATION AND ADDITIONAL INFORMATION

**Prepared by:** Sterling Marking Products Inc.  
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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).