

Henkel Corporation  
710 Ohio Street  
Buffalo, NY 14203

Attn: Plant Manager/Director Safety  
HENKEL CORPORATION UBFLBALF  
BUFFALO NY 14203

8/16/07

Dear Customer:

The enclosed Material Safety Data Sheet (MSDS) is being provided in conformance with the OSHA Hazard Communication Standard.

If someone other than the recipient is responsible for your hazard communication program, please forward it to his/her attention.

The standard requires you to maintain a file of MSDS for each hazardous material you use, and to communicate and make this information available to your employees.

If you require additional information concerning this product, please contact your local salesperson.

We appreciate your patronage and look forward to serving you in the future.

Henkel Corporation

Henkel Corporation  
 710 Ohio Street  
 Buffalo, NY 14203  
 DOT EMERGENCY (860)571-5100  
 INFORMATION PHONE NO. 800-888-4910 M-F 7:30 AM 5:30 PM

H.M.I.S.  
 HEALTH 2  
 FLAMMABILITY 0  
 REACTIVITY 2  
 These ratings should be used only  
 as part of full implemented  
 H.M.I.S. program.

**M A T E R I A L S A F E T Y D A T A S H E E T**

**SECTION 1 - PRODUCT INFORMATION**

DATE OF PREPARATION 8/16/07  
 TRADE NAME..... **MIRACURE** PHYSICAL FORM: **100% NV - LIQUID**  
 MANUFACTURER CODE I.D. **UVG1049D1**

**SECTION 2 - HAZARDOUS INGREDIENTS/COMPOSITION INFORMATION**

INGREDIENT	CAS NO.	PPM MG/CU.M.	ALLOWABLE	SARA	VP
			EXPOSURE LEVEL	313	mm Hg @ 20 DEG.C
					SKIN
MONOMERIC MULTI-FUNCTIONAL ACRYLATES	TSRN-HM2138 MFR	1			SKIN
MULTIFUNCTIONAL ACRYLATE	TSRN9051M01 MFR	1			SKIN
BENZOPHENONE	119-61-9	NONE ESTABLISHED			
POLYESTER ACRYLATE	TSRN2222R01 MFR	1			SKIN
ACRYLATED POLYETHER	TSRN-HM2491	NONE ESTABLISHED			
AMINE SYNERGIST	TSRN4234M01	NONE ESTABLISHED			
DIMETHYL SILOXANE POLYMER	TSRN125301	NONE ESTABLISHED			

SKIN = SKIN ABSORPTION MUST BE CONSIDERED AS A ROUTE OF EXPOSURE  
 C-CEILING= ALLOW. EXPOSURE LEVEL SHOULD NOT BE EXCEEDED FOR ANY TIME PERIOD  
 MFR = MANUFACTURER RECOMMENDED EXPOSURE LIMIT  
 STEL = SHORT TERM EXPOSURE LIMIT  
 X-SARA 313 = CHEMICAL IS SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313  
 OF TITLE III OF S.A.R.A. 40 CFR PART 372

**SECTION 3 - HAZARDS IDENTIFICATION**

EFFECTS OF SHORT TERM OVEREXPOSURE  
 SWALLOWING  
 Harmful if swallowed.  
 INHALATION  
 May cause respiratory sensitization (potential for allergic reaction).  
 May cause respiratory irritation.  
 EYE  
 May cause severe eye irritation and corneal damage.  
 SKIN  
 May cause skin sensitization (allergic reaction).  
 Contact with heated material may cause skin irritation or burns.  
 Allergies, eczema or skin conditions may be aggravated by exposure.  
 Skin irritation may be delayed. Direct skin contact may not cause immediate

### SECTION 3 - HAZARDS IDENTIFICATION (Continued)

SKIN  
irritation. Tissue redness, dryness, or discharge may occur several hours after exposure. Avoid all skin contact.  
May cause skin irritation.

EFFECTS OF REPEATED OVEREXPOSURE  
May result in skin sensitization.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH.  
The supplier of the multifunctional acrylate contained in this product has reported limited evidence of mutagenicity in " test tube " studies involving animal tissue (mouse lymphoma). Other mutagenicity studies involving bacteria (Ames Test) and yeast (D4) were negative. A relationship between these studies and humans has not been established. Other animal studies provided no evidence of this multifunctional acrylate exhibiting teratogenicity (birth defects) or carcinogenicity.

### SECTION 4 - FIRST-AID MEASURES

SWALLOWING  
If swallowed do not induce vomiting. Give 1 or 2 glasses of water to dilute (Never give anything by mouth to an unconscious person). Call the Poison Control Center , Hospital Emergency Room, or Physician immediately.

INHALATION  
Remove to fresh air. Get medical attention.

EYE  
Flush with large amounts of water, lifting upper and lower lids occasionally. Continue for at least 15 minutes. Get medical attention immediately.

SKIN  
Remove contaminated clothing, use waterless skin cleaner followed by soap and water wash. Obtain medical attention if irritation persists.  
Remove contaminated clothing. Wash affected area with soap and water.  
Obtain medical attention if irritation persists.

NOTES TO PHYSICIAN  
Treatment of the eyes with an ophthalmic steroid medication may be beneficial. For the skin, topical steroids, and possibly systemic use of steroids would be indicated.

### SECTION 5 - FIRE-FIGHTING MEASURES

NFPA FLAMMABILITY CLASSIFICATION Not Applicable

FLASHPOINT Not applicable

EXTINGUISHING MEDIA  
None should be needed.

UNUSUAL FIRE AND EXPLOSION HAZARDS  
None known.

SPECIAL FIRE FIGHTING PROCEDURES  
None known

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED  
Potential skin sensitizer, avoid skin contact  
Refer to Section 8 and don respirators, eye, hand, and body protection appropriate for the size of the spill and the exposures encountered.

WASTE DISPOSAL  
Dispose in accordance with federal, state and local regulations.

ENVIRONMENTAL HAZARDS  
None known

### SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE  
Avoid contact. Refer to Section 8 for exposure control.

**SECTION 7 - HANDLING AND STORAGE (Continued)**

**OTHER PRECAUTIONS**

Do not take internally. Close container after each use. Avoid skin contact.  
Keep away from children.  
Containers should be grounded and bonded to the receiving container.  
Do not weld, braze or cut on empty container.  
Never use pressure to empty. Drum is not a pressure vessel.

**SECTION 8 - EXPOSURE CONTROLS**

**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 well ventilated areas. In areas of restricted ventilation a NIOSH approved organic vapor respirator may be required. Under certain conditions, such as spraying, a mechanical prefilter 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 or PEL's listed in Section II are exceeded use a properly fitted NIOSH/MSHA approved respirator with an appropriate protection factor. Refer to OSHA 29 CFR 1910.134 "Respiratory Protection", and "Respiratory Protection a Manual and Guideline, American Industrial Hygiene Association".

**VENTILATION**

Use general dilution and local exhaust ventilation 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. Refer to "Industrial Ventilation a Manual of Recommended Practice"-ACGIH.

**HAND PROTECTION**

Barrier cream and chemically impermeable gloves.  
Wear appropriate impermeable gloves.

**EYE PROTECTION**

Wear safety glasses meeting the specifications 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.

**OTHER PROTECTIVE EQUIPMENT**

Eyewash facility, safety shower.  
As required to prevent skin contact.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING RANGE** 200 DEG.F. ( 93 DEG.C.)

**VAPOR DENSITY** Not applicable.      **% VOLATILE BY VOLUME** 0

**EVAPORATION RATE**      **VOC** .00 lb/gal less water& NPRS\*      0 g/l less water      CALCULATED  
Not applicable.

**WEIGHT LB./GAL.** 8.9      **VOC** .00 lb/gal solids      0 g/l solids      CALCULATED  
**SPECIFIC GRAVITY** 1.1

All Physical data determined at 68 DEG. F. (20 DEG. C.) 760 mm Hg

\* Negligibly Photochemically Reactive Materials

**SECTION 10 - STABILITY AND REACTIVITY**

**STABILITY**

Normally stable. Polymerization resulting in the rapid evolution of heat may result from exposure to high temperatures.  
This material is normally stable, However, inhibitor depletion, exposure to heat, radiation (including sunlight), impurities, and oxidizers may initiate hazardous polymerization. The resulting heat and pressure may

**SECTION 10 - STABILITY AND REACTIVITY (Continued)**

**STABILITY**

cause containers to rupture or explode. Maintain an airspace within storage containers. The preferred storage temperature is 68-72 deg.F (20-22 deg. C). This material should be transferred in lines made of stainless steel or aluminium. All piping and pumps should also be stainless steel. Avoid the use of iron, copper or their alloys which may result in hazardous polymerization or color degradation. Solvent resistant plastics, such as Tygon may be used. The tubing should be opaque to avoid curing in the lines. Pumps should be low shear, such as centrifugal, peristaltic, diaphragm, or low shear progressive cavity pumps. The use of high shear pumps (gear or piston) should be avoided. Clear pumps and lines with compressed air after transfer.

**CONDITIONS TO AVOID**

Avoid excessive heat (>115 F (46 C) and sources of ignition.  
Avoid storage above 90 F, exposure, to light, loss of dissolved air, loss of polymerization inhibitor, contamination with incompatible materials.

**INCOMPATIBILITY (MATERIALS TO AVOID)**

Strong acids or alkaline materials.  
Metal powders, carbides, sulfides, strong bases, and organic chemicals.  
Oxidizing materials.  
Free radical initiators.  
Copper and copper alloys.  
Metals.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Burning, including when heated by welding or cutting, will produce smoke, carbon monoxide and carbon dioxide.

**HAZARDOUS POLYMERIZATION**

May occur

**CONDITIONS TO AVOID**

Avoid temperatures > 90 F (32C), loss of dissolved air, loss of inhibitor, or contamination.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

No information available.

**SECTION 12 - ECOLOGICAL INFORMATION**

No information available.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

See Section 6.

**SECTION 14 - TRANSPORT INFORMATION**

**ITEM: UVG1049D1**

**DESC/SIZE: MIRACURE**

MODE	PROPER SHIPPING NAME	CLASS	I.D.#	PKG	GRP
IATA					
(AIR)	PAINT, NOT RESTRICTED				
DOT (HM-181)					
(DOMESTIC SURFACE)	PAINT, NOT REGULATED				
IMDG CODE					
(OCEAN)	PAINT, NOT REGULATED				

NOTE! The assignment of Proper Shipping Names is in part a function of the size of the product container and the transport mode. For example, the Proper Shipping Name for a bulk container can differ significantly from the Proper Shipping Name for the same product packaged in a non-bulk container. This can also be true for products shipped via different modes of transportation (i.e. ground, air, ocean). The descriptions provided above

**SECTION 14 - TRANSPORT INFORMATION (Continued)**

are intended to provide some guidance. However, these descriptions may not apply to your package size or mode of shipment. The U.S. Code of Federal Regulations, 49 CFR - Transportation, regulations, and the policies established by some transporters, require that the shipper properly classify and assign a Proper Shipping Name, and label, mark and package the material properly. Therefore, the user of this information is cautioned to consult with applicable regulations, and with qualified advisors prior to the repackaging and or reshipment of this or other any product which contain this product.

**SECTION 15 - REGULATORY INFORMATION**

All ingredients in this product are listed on the US TSCA Inventory.

INGREDIENT	CAS NO.	DETAIL INVENTORY LIST INFORMATION
MONOMERIC MULTI-FUNCTIONAL ACRYLATES	TSRN-HM2138	DSL
MULTIFUNCTIONAL ACRYLATE	TSRN9051M01	TSCA(8a PAIR) TSCA(8d) TSCA(8d term) DSL
BENZOPHENONE	119-61-9	DSL
POLYESTER ACRYLATE	TSRN2222R01	No information available.
ACRYLATED POLYETHER	TSRN-HM2491	No information available.
AMINE SYNERGIST	TSRN4234M01	DSL
DIMETHYL SILOXANE POLYMER	TSRN125301	DSL

DETAIL INVENTORY LIST DESCRIPTION

TSCA/Toxic Substances Control Act  
(8a PAIR)Preliminary Assesment Information Rules  
(8d)Health and Safety Reporting Rules  
(8d term)Health and Safety Reporting Rules termination  
DSL/Canadian Domestic Substance List

**SECTION 16 - OTHER INFORMATION**

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

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**SECTION 16 - OTHER INFORMATION (Continued)**

For Safety and Regulatory Information contact:  
Product Safety and Regulatory Affairs,  
Rocky Hill, CT  
860-571-5204

HENKEL CORPORATION UBFLBALF  
BUFFALO NY  
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