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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 8/23/06  
 TRADE NAME..... MIRACURE PHYSICAL FORM: 100% NV - LIQUID  
 MANUFACTURER CODE I.D. UVA105M (Formerly a Sovereign Specialty Chemical Inc Product)

SECTION 2 - HAZARDOUS INGREDIENTS/COMPOSITION INFORMATION

INGREDIENT	% BY WGT	CAS NO.	PPM MG/CU.M.	ALLOWABLE	SARA	VP
				EXPOSURE LEVEL	313	mm Hg @ 20 DEG.C
ACRYLATE ESTER DERIVATIVE		TSRN9999R01	NONE ESTABLISHED			
ACRYLATE ESTER		TSRN7212R02	NONE ESTABLISHED			
ACRYLATE OLIGOMER		TSRNHM2490 MFR	1	SKIN		
MONOMERIC ACRYLATE		TSRN4491M01 MFR	1	SKIN		
ALKOXYLATED ACRYLATE		TSRN2133R01	NONE ESTABLISHED			
KETONE TYPE PHOTO-INITIATOR		TSRN9081M01 MFR	1			
ACRYLATED OLIGOMER		TSRNHM2828	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).  
 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.  
The supplier of the Acrylate Oligomer reports limited evidence of mutagenicity in test tube studies. Limited tests showed no evidence of teratogenicity in animals.  
May cause skin irritation.

EFFECTS OF REPEATED OVEREXPOSURE  
May lead to skin sensitization.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH.  
The supplier reports that the acrylate contained in this product has shown limited evidence of mutagenicity (in vitro).

### 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 immediately. If breathing has stopped, give artificial respiration. Keep warm and quiet. Get medical attention immediately.

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. Wash affected area with soap and water. Obtain medical attention if irritation persists.

NOTES TO PHYSICIAN  
Any treatment that might be required for overexposure should be directed at the control of symptoms and the clinical conditions.

### SECTION 5 - FIRE-FIGHTING MEASURES

NFPA FLAMMABILITY CLASSIFICATION Not Applicable

FLASHPOINT Not applicable

EXTINGUISHING MEDIA

Use NFPA Class B Fire extinguishers (carbon dioxide, all purpose dry chemical or alcohol foam) designed to extinguish flammable liquid fires. Polymer foam is preferred for large fires.

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

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.

OTHER PRECAUTIONS

Do not take internally. Close container after each use. Avoid skin contact.

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

**OTHER PRECAUTIONS**

Keep away from children.  
Avoid skin contact.  
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**

Provide 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. Remove decomposition products that are generated when welding, cutting, or brazing objects coated with this product. Refer to "Industrial Ventilation - A Manual of Recommended Practice " ACGIH .

**HAND PROTECTION**

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.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING RANGE** Not applicable

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

**EVAPORATION RATE**      **VOC** .01 lb/gal less water& NPRS\*      1 g/l less water      CALCULATED  
Not applicable.

**WEIGHT LB./GAL.** 9.1      **VOC** .01 lb/gal solids      1 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. Do not store at/below 32F -- inhibitor can separate as a solid. If frozen, warm and remix material gently (< 90F).

**INCOMPATIBILITY (MATERIALS TO AVOID)**

Strong acids or alkaline materials.  
Metal powders, carbides, sulfides, strong bases, and organic chemicals.  
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:	UVA105M	DESC/SIZE: MIRACURE			
MODE	PROPER SHIPPING NAME		CLASS	I.D.#	PKG GRP
	NAERG: FD,SU				
IATA					
(AIR)	ADHESIVES, NOT REGULATED				
DOT (HM-181)					
(DOMESTIC SURFACE)	ADHESIVES, NOT REGULATED				
IMDG CODE					
(OCEAN)	ADHESIVES, 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.

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

This can also be true for products shipped via different modes of transportation (i.e. ground, air, ocean). The descriptions provided above 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
ACRYLATE ESTER DERIVATIVE	TSRN9999R01	TSCA NDSL
ACRYLATE ESTER	TSRN7212R02	No information available.
ACRYLATE OLIGOMER	TSRNHM2490	No information available.
MONOMERIC ACRYLATE	TSRN4491M01	DSL
ALKOXYLATED ACRYLATE	TSRN2133R01	DSL
KETONE TYPE PHOTO-INITIATOR	TSRN9081M01	DSL
ACRYLATED OLIGOMER	TSRNHM2828	No information available.

DETAIL INVENTORY LIST DESCRIPTION

TSCA/Toxic Substances Control Act  
DSL/Canadian Domestic Substance List  
NDSL/Canadian Non-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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For Safety and Regulatory Information contact:  
Product Safety and Regulatory Affairs,  
Rocky Hill, CT

SECTION 16 - OTHER INFORMATION (Continued)

860-571-5204