

MSDS ID: 8092642

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT PART NUMBER: 8092642
DESCRIPTION: 9060 EXH WHITE

COMPANY:
Markem Corporation
150 Congress Street
Keene, NH 03431

EMERGENCY RESPONSE NUMBERS:
Transportation:
United States: (800) 424-9300
International: (703) 527-3887(collect)
Product Safety and Environmental:
(603) 352-1130

2. HAZARDOUS INGREDIENTS

COMPONENT	CAS #	PCT(WT)
Bisphenol A epoxy diacrylate	55818-57-0	10-30
Glycerol propoxylate triacrylate	52408-84-1	5-10
Pentaerythritol tetraacrylate	4986-89-4	10-30
Pentaerythritol triacrylate	3524-68-3	1-5
Silica, amorphous	7631-86-9	1-5
2,2-dimethoxy-2-phenylacetophenone	24650-42-8	1-5

Exposure and physical property information is presented in Section 9. If the total percentage is less than 100, the balance of this product is not considered to be hazardous as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS RATING SYSTEM
Health: 3
Flammability: 2
Reactivity: 2
Protection: B

NFPA RATING SYSTEM
Health: 3
Flammability: 2
Reactivity: 2

POTENTIAL HEALTH CONSIDERATIONS

LIKELY ROUTES OF ENTRY:
Contact; Inhalation; Absorption; Ingestion

TARGET ORGANS:
Respiratory Tract; Eyes; Skin; Nervous System;

3. HAZARDS IDENTIFICATION (Cont.)

POTENTIAL IMMEDIATE EFFECTS FROM OVEREXPOSURE

EYE CONTACT

Corrosive to eye tissue. Can cause severe irritation, tearing and burns leading to permanent injury including blindness.

SKIN CONTACT

Corrosive to skin tissue, can cause chemical burns.

Skin Sensitizer! Avoid exposure. If sensitized, repeated exposures will result in skin irritation, even at very low concentrations.

Can cause light sensitivity which appears as a skin rash when exposed to sunlight or ultraviolet sources.

SKIN ABSORPTION

Toxic if absorbed through the skin causing systemic damage.

INHALATION

Can cause respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

INGESTION

Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.

POTENTIAL LONG-TERM EFFECTS FROM OVEREXPOSURE:

CANCER INFORMATION

None of the substances in this product have been shown to cause cancer.

Not a carcinogen according to NTP, IARC or OSHA.

No IARC cancer hazard information available.

No ACGIH cancer hazard information available.

No NTP cancer hazard information available.

No OSHA cancer hazard information available.

REPRODUCTIVE SYSTEM INFORMATION

None of the substances in this product have been shown to cause reproductive system disorders.

ADDITIONAL HEALTH HAZARD INFORMATION

Glycerol propoxylate triacrylate: Irritation may be delayed 24-48 hours.

Amorphous silica: This product contains amorphous silica. Silica can be hazardous if respirated into the lungs. The silica in this product is bound to the polymers present in the ink and will not become a hazard unless the printed surface is abraded in a manner that creates respirable dust.

2-2-Dimethoxy-1,2-diphenylethanone: may cause allergic skin reaction when exposed in the presence of UV or sunlight.

MEDICAL CONDITIONS POTENTIALLY AGGRAVATED BY OVEREXPOSURE

Skin disease including eczema and sensitization, Lung disease, Eye disease,

4. FIRST AID MEASURES

EYE CONTACT

Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Get immediate medical attention.

SKIN CONTACT

Wash skin with soap and water. Immediately remove contaminated clothing and get medical attention. Launder or discard contaminated clothing at once.

INHALATION

Remove to fresh air. If not breathing, perform rescue breathing and, if available, have a trained person administer oxygen.

Get medical attention immediately.

INGESTION

Emergency personnel should be contacted immediately and be provided with this MSDS. For ingestion of small quantities of chemicals, the risk associated with inducing vomiting usually exceeds the poisoning risk.

5. FIRE FIGHTING MEASURES

FLAMMABILITY DATA

FLASH POINT: 199 F, 93 C

EXPLOSIVE/FLAMMABILITY LIMITS ESTIMATED FROM INGREDIENTS:

LOWER LIMIT: ND %

UPPER LIMIT: ND %

AUTOIGNITION TEMPERATURE ESTIMATED FROM INGREDIENTS:

ND F, ND C

GENERAL HAZARDS

Material may ignite if heated to temperatures above the flash point in the presence of a source of ignition.

EXTINGUISHING MEDIA

Use alcohol foam, carbon dioxide (CO₂) or dry chemical. Water may not be effective to extinguish fire. Use water spray to cool fire-exposed containers and to protect personnel.

FIRE FIGHTING INSTRUCTIONS

Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location. Heat may build pressure and rupture closed containers, spreading fire and increasing risk of burns or injuries. Use water spray/fog for cooling. Even if material is water soluble, it may not be practical to extinguish fire by water dilution. Notify authorities if liquid enters sewers or other public waters.

HAZARDOUS COMBUSTION PRODUCTS

carbon dioxide; carbon monoxide

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEAN-UP PROCEDURES

Prevent the spread of any spill to minimize harm to human health and the environment. Dike with suitable absorbent material. Wear complete and proper personal protective equipment and ventilate the area.

HEALTH CONSIDERATIONS AND PROTECTIVE EQUIPMENT

Information on the selection and use of personal protective equipment is found in Section 8 of this MSDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; material spilled, quantity, the area in which it occurred and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits and consider that the evaporation of volatile solvents can lead to the displacement of air creating an environment that can cause asphyxiation.

7. HANDLING AND STORAGE

HANDLING

Avoid contact with material, avoid breathing vapors, use only in a well ventilated area.

STORAGE

Store in a cool, dry place. Isolate from incompatible materials.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS

Air exposure limits exist for the colorants in this product. Exposure is unlikely unless aerosols or dusts of the product are formed. If that occurs it may be necessary to implement a respiratory protection program.

RESPIRATORY PROTECTION

If air monitoring indicates airborne concentrations at or above the limits, or symptoms of inhalation over-exposure occur, a respiratory protection program may be required. Engineering controls to reduce the exposure below acceptable limits are usually preferable to a respirator program.

EYE PROTECTION

Chemically resistant safety glasses with side shields must be worn when handling this product. Further eye protection such as chemical splash goggles and/or face shield must be worn when the possibility exists for eye contact due to splashing or spraying liquid or airborne particles. Contact lenses should not be worn. An eye wash station should be available.

SKIN PROTECTION

Prevent skin contact by wearing gloves and other protective equipment. Inspect gloves for chemical break-through and replace if detected. Clean protective equipment thoroughly after each use. Do not remove from workplace. An emergency shower in the area is recommended. Appropriate gloves to be used for MARKEM products that are mixtures have not

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

been determined. Glove type(s) for ingredients present at 10% or more (if known) are:

Nitrile

9. PHYSICAL AND CHEMICAL PROPERTIES - PRODUCT

APPEARANCE: Liquid
 COLOR: White
 ODOR: Characteristic
 SPECIFIC GRAVITY(g/ml): 2.60
 PERCENT VOLATILE: 0
 VOC CONTENT(lb/gal): Not determined
 VAPOR PRESSURE (Pa): Not determined
 BOILING PT OR RANGE(F): ND
 pH: NA
 VISCOSITY: ND
 VAPOR DENSITY: Heavier than air
 FREEZING POINT(F): ND
 EVAPORATION RATE: <0.01 (n-Butyl acetate = 1)

9.1 EXPOSURE, PHYSICAL AND CHEMICAL PROPERTIES FOR COMPONENTS

COMPONENT	ACGIH		OSHA	
	TWA\CEIL	STEL	TWA	CEIL
55818-57-0	NE	NE	NE	NE
52408-84-1	NE	NE	NE	NE
4986-89-4	NE	NE	NE	NE
3524-68-3	NE	NE	NE	NE
7631-86-9	10 mg/m3	NE	6 MPPCF	NE
24650-42-8	NE	NE	NE	NE

COMPONENT CAS NUMBER	SPECIFIC GRAVITY	EVAP RATE N-BUTYL ACETATE=1	WATER SOLUBILITY		VAPOR PRESSURE mmHg at F
			Weight %		
55818-57-0	1.150	<0.01	Negligible	Negligible	
52408-84-1	1.000	ND	ND	ND	
4986-89-4	1.000	ND	ND	ND	
3524-68-3	1.180	ND	Negligible	ND	
7631-86-9	1.000	ND	ND	ND	
24650-42-8	1.200	ND	Negligible	ND	

10. STABILITY AND REACTIVITY

STABILITY

Normally unstable.

CONDITIONS TO AVOID

Elevated temperatures in combination with sparks, open flames, or other sources of ignition.

 10. STABILITY AND REACTIVITY (Cont.)

INCOMPATIBILITY

acids; caustics (bases); strong oxidizing agents; carbon steel; copper; rust

HAZARDOUS DECOMPOSITION PRODUCTS

carbon dioxide; carbon monoxide

 11. TOXICOLOGICAL INFORMATION

Acrylate Ester of Pentaerythritol:

Eye rabbit: 1 mg, Effect: Severe

Oral LD50 rat: 2460 uL/kg

 12. ECOLOGICAL INFORMATION

No information available.

 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all federal, state, local or provincial regulations.

 14. TRANSPORT INFORMATION, DOT and IATA:

DOT & IATA: NOT RESTRICTED

 15. REGULATORY INFORMATION

Those ingredients appearing on the following list that do not appear in Section 2 are present at <0.1% for carcinogens, <1% for other hazardous substances, or are not considered hazardous in this product.

UNITED STATES OF AMERICA

FEDERAL REGULATIONS

CERCLA: The following components have CERCLA reportable quantities:

CASRN	DESCRIPTION	CERCLA RQ	WEIGHT%
None			

RCRA: The following components are subject to RCRA land disposal restrictions:

CASRN	DESCRIPTION
None	

None

SARA TITLE III

SECTION 302 Extremely Hazardous Substances (EHS)

CASRN	DESCRIPTION
None	

None

SECTION 311/312 Community Right to Know

CASRN	DESCRIPTION
None	

None

SARA HAZARD CATEGORY INFORMATION

 15. REGULATORY INFORMATION (Cont.)

FIRE: NO

SUDDEN RELEASE OF PRESSURE: NO

REACTIVE: NO

IMMEDIATE (ACUTE) HEALTH HAZARD: NO

DELAYED (CHRONIC) HEALTH HAZARD: NO

SECTION 313 Toxic Chemical Release Inventory Reporting (TRI)

CASRN DESCRIPTION

None

TSCA

SECTION 8(b) Inventory: All chemicals in this product appear in the inventory or are exempt from the listing requirements.

SECTION 12(b) Export: The following chemicals are subject to export reporting

CASRN DESCRIPTION

None

STATE REGULATIONS

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)

The following chemical(s) in this product are known to the State of California to cause cancer:

CASRN DESCRIPTION WGT%

None

The following chemical(s) in this product are known to the State of California to be hazards to reproductive health:

WGT%
None

None

MASSACHUSETTS Right to Know Law

CASRN DESCRIPTION %

7631-86-9 AMORPHOUS SILICA 1-5

NEW JERSEY Right to Know Law

CASRN DESCRIPTION %

7631-86-9 SILICA, AMORPHOUS 1-5

PENNSYLVANIA Right to Know Law

CASRN DESCRIPTION %

7631-86-9 SILICA, AMORPHOUS 1-5

 16. OTHER INFORMATION

Note: A CAS number in the form TSXXXX-XX-X is a trade secret.

NA= Not applicable

ND= Not determined

TS= Trade secret

MSDS prepared by Richard C. Berry

This information is offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling practices are believed to be generally applicable, however each user must review the recommendations and determine the suitability for their intended use.