

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME:** UV Coating Systems

### SECTION I – MANUFACTURER IDENTIFICATION

**MANUFACTURER'S NAME:** Midwest Chemicals  
**ADDRESS:** 6425 Pinecastle Blvd, Orlando, FL 32809

**DATE REVISED:** 01/17/09

### SECTION II - INGREDIENTS/SARA III INFORMATION

| COMPONENTS         | OCCUPATIONAL EXPOSURE LIMITS |          |           | VAPOR PRESSURE<br>mm hG @ TEMP | WEIGHT<br>PERCENT |
|--------------------|------------------------------|----------|-----------|--------------------------------|-------------------|
|                    | CAS NUMBER                   | OSHA PEL | ACGIH TLV |                                |                   |
| URETHANE ACRYLATE  | PROPRIETARY                  |          |           |                                | 20 - 50%          |
| POLYESTER ACRYLATE | PROPRIETARY                  |          |           |                                | 20 - 50%          |
| ACRYLATE ESTERS    | PROPRIETARY                  |          |           |                                | 40 - 60%          |
| PHOTO INITIATORS   | PROPRIETARY                  |          |           |                                | 3 - 15%           |

\*\*\*No toxic chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372 are present.\*\*\*  
NO ADDITIONAL INFORMATION APPLICABLE.

### Sysopsis

UV Coatings is a totally **GREEN** Environmentally Safe Product.

**This material is considered non-toxic, non-flammable and contains no materials that require reporting under TSCA. It contains no volatile organic compounds (VOC's). It will not cause cancer or cause birth defects in unborn children.** It is classified as an irritant. This means that it may cause mild respiratory or skin reactions in sensitive individuals. It should not be used in a closed area without ventilation, as odors may not dissipate readily. **As with any chemical product, it should always be handled with gloves**, and it is advisable to apply a barrier cream before putting on the gloves. **It should always be used with eye protection**, as any material splashed or introduced into the eye may cause burning and irritation. It should not be allowed to contact clothing or shoes, as it may cause skin contact that will go unnoticed for some time. If the product is sprayed, the area should be well-ventilated and the operators should wear respirators with organic vapor cartridges and spray goggles. Our UV system will **NOT** release any acetic acids because of our involved technology in UV coating, the acids are encapsulated 100% in the monomers.

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

**BOILING POINT:** >200°F

**VAPOR DENSITY:** N/A

**COATING V.O.C.:** 0

**SOLUBILITY IN WATER:** NOT SOLUBLE IN WATER

**APPEARANCE AND ODOR:** VISCOUS CLEAR LIQUID, RESINOUS ODOR

**SPECIFIC GRAVITY (H2O)=1) :** 1.01

**EVAPORATION RATE:** N/A

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA****FLASH POINT:** >200°F**METHOD USED:** SETAFLASH**FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER:** N/A **UPPER:** N/A**EXTINGUISHING MEDIA:** FOAM, CO2, DRY CHEMICAL, WATER FOG**SPECIAL FIRE FIGHTING PROCEDURES**

REMOVE ALL IGNITION SOURCES. WEAR SELF CONTAINED BREATHING APPARATUS AND COMPLETE PERSONAL PROTECTIVE EQUIPMENT. FIGHT FIRE FROM SAFE DISTANCE. USE WATER SPRAY/FOG FOR COOLING. AVOID FROTHING/STEAM EXPLOSION.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

HIGH TEMPERATURES AND FIRE CONDITIONS MAY CAUSE RAPID AND UNCONTROLLED POLYMERIZATION WHICH CAN RESULT IN THE RUPTURE OF STORAGE VESSELS OR CONTAINERS. AVOID THE USE OF A STREAM OF WATER TO CONTROL FIRES SINCE FROTHING CAN OCCUR. THERMAL DECOMPOSITION CAN LEAD TO THE EVOLUTION OF IRRITANT VAPORS OR GASES AND/OR FIRES.

**SECTION V - REACTIVITY DATA****STABILITY:** UNSTABLE. MAY UNDERGO POLYMERIZATION.**CONDITIONS TO AVOID**

HEAT; OPEN FLAME; LIGHT; UV RADIATION; INERT GAS BLANKETING, CONTAMINATION WITH INCOMPATIBLE MATERIALS.

**INCOMPATIBILITY (MATERIALS TO AVOID)**

PRIMARY AND SECONDARY AMINES, ACIDS, ALKALIS, FREE RADICAL PRODUCING INITIATORS.

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS**

FUMES PRODUCED WHEN HEATED MAY INCLUDE BUT ARE NOT LIMITED TO: CARBON MONOXIDE, CARBON DIOXIDE AND OXIDES OF NITROGEN.

**HAZARDOUS POLYMERIZATION:** MAY OCCUR. EXOTHERMIC WITH THE EVOLUTION OF IRRITANT FUMES.**SECTION VI - HEALTH HAZARD DATA****INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

SPECIFIC INFORMATION IS NOT AVAILABLE, HOWEVER, EXCESSIVE HEATING (>80C) CAN GENERATE VAPORS THAT MAY CAUSE HEADACHES, DIZZINESS, AND RESPIRATORY IRRITATION IF INHALED.

**SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

MAY CAUSE MODERATE SKIN INJURY (REDDENING & SWELLING) AND/OR SENSITIZATION. PROLONGED CONTACT MAY CAUSE BLISTER FORMATION (BURNS). IRRITATION MAY NOT OCCUR IMMEDIATELY--CONTACT CAN GO UNNOTICED.

**SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

SKIN ABSORPTION IS NOT A PRIMARY ENTRY PATH. HOWEVER, IF CONTACT IS MAINTAINED WITH SKIN FOR LONG PERIODS, SOME ABSORPTION MAY OCCUR.

**INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

IF APPRECIABLE QUANTITIES ARE SWALLOWED, SEEK MEDICAL ATTENTION.

**HEALTH HAZARDS (ACUTE AND CHRONIC)**

ACUTE--MAY CAUSE IRRITATION OF SKIN, EYES OR MUCOSA AS A RESULT OF PROLONGED EXPOSURE.  
CHRONIC--MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS.

**CARCINOGENICITY:** NTP? NO **IARC MONOGRAPHS?** NO **OSHA REGULATED?** NO

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**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE**

ASTHMA, DERMATITIS.

**EMERGENCY AND FIRST AID PROCEDURES**

EYE CONTACT--FLUSH WITH PLENTY OF WATER >15 MINUTES. SKIN CONTACT--REMOVE CONTAMINATED CLOTHING AND WASH WITH SOAP AND WATER FOR >15 MINUTES. PARTICULAR ATTENTION SHOULD BE PAID TO HAIR, NOSE, EARS AND OTHER AREAS NOT EASILY CLEANED. SEE SPECIAL PRECAUTIONS--EFFECTS CAN BE DELAYED 24-48 HOURS. INGESTION--IF APPRECIABLE QUANTITIES ARE SWALLOWED, SEEK MEDICAL ATTENTION. INHALATION--IN CASE OF EXPOSURE TO HIGH CONCENTRATION OF VAPOR OR MIST, REMOVE PERSON TO FRESH AIR. IF BREATHING HAS STOPPED, ADMINISTER ARTIFICIAL RESPIRATION AND SEEK MEDICAL ATTENTION.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

RESTRICT ACCESS TO SPILL AREA.. ELIMINATE IGNITION SOURCES. USE SKIN & EYE PROTECTION. PLACE LEAKING CONTAINERS IN A WELL- VENTILATED AREA. ABSORB WITH INERT MATERIAL AND DISPOSE. FLUSH AREA WITH WATER; PREVENT WASHINGS FROM ENTERING WATERWAYS.

**WASTE DISPOSAL METHOD**

POLYMERIZE MATERIAL AND DISPOSE AS SOLID WASTE OR INCINERATE OR USE BIOLOGICAL TREATMENT IN ACCORDANCE WITH FEDERAL, STATELOCAL, AND ENVIRONMENTAL REGULATIONS.

**PRECAUTIONS TO BE TAKEN IN STORAGE AND HANDLING**

CHEMICAL SAFETY GOGGLES. IMPERMEABLE GLOVES. SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST RECOMMENDED. AVOID INHALATION. DO NOT GET IN EYES, ON SKIN, OR CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. WASH THOROUGHLY AFTER HANDLING.

**OTHER PRECAUTIONS**

STORE IN COOL DRY PLACE. AVOID IGNITION SOURCES. KEEP CONTAINERS CLOSED. DISSOLVED AIR IS REQUIRED FOR INHIBITOR TO FUNCTION. TO PREVENT LOSS OF INHIBITOR DO NOT BLANKET OR SPARGE WITH NITROGEN. STORE SAMPLE IN OPAQUE OR AMBER CONTAINERS. REMOVE ALL CONTAMINATED CLOTHES, SHOES, BELTS, AND LEATHER GOODS IMMEDIATELY. SOLVENTS SHOULD NOT BE USED TO CLEAN SKIN BECAUSE OF INCREASED PENETRATION POTENTIAL.

**SECTION VIII - CONTROL MEASURES**

**RESPIRATORY PROTECTION AND VENTILATION**

LOCAL EXHAUST IS RECOMMENDED TO CONTROL EXPOSURE WHICH MAY RESULT FROM OPERATIONS GENERATING AEROSOLS AND HOT OPERATIONS GENERATING VAPORS. WHEN EXPOSED TO AEROSOLS OR VAPORS, USE FULL FACE NIOSH/MSHA APPROVED RESPIRATOR WITH PARTICULATE PRE-FILTER. IN EMERGENCY SITUATIONS, OR WHEN USED IN CONFINED SPACES, USE SELF-CONTAINED BREATHING APPARATUS OR OTHER AIR SUPPLIED FULL FACE RESPIRATOR. USE MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE.

**PROTECTIVE GLOVES**

USE IMPERMEABLE GLOVES (NEOPRENE, LATEX OR NITRILE). A COMBINATION OF BARRIER CREAM, APPLIED BEFORE EXPOSURE, AND GLOVES IS RECOMMENDED.

**EYE PROTECTION**

CHEMICAL SPLASH GOGGLES.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT**

A SAFETY SHOWER AND EYE WASH FACILITY SHOULD BE AVAILABLE. FOR ROUTINE LABORATORY OPERATIONS, AN IMPERMEABLE APRON AND GLOVES ARE RECOMMENDED.

**WORK/HYGIENIC PRACTICES**

WASH GLOVES FREQUENTLY WITH SOAP AND WATER. AVOID TOUCHING EXPOSED SKIN AREAS WITH GLOVED HANDS. AVOID CONTACT LENSES.

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**SECTION IX - DISCLAIMER**

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**DISCLAIMER**

SOME OF THE INFORMATION PRESENTED AND CONCLUDED HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE PRODUCT. SOME INFORMATION WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE, HOWEVER IT IS PROVIDED WITHOUT WARRANTY. THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND WE ASSUME NO RESPONSIBILITY.