



# DURA TECHNOLOGIES, INC.

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## **DURATEC COATING VOC 904-045 CLEAR HIGLOSS TOP COAT**

The Composites Fabricators Association in association with the EPA conducted a study of styrene emissions from open mold composite manufacturing. Styrene monomer is a volatile liquid that will react to form a non-volatile copolymer with unsaturated polyester resins. The value to determine is thus the amount of material lost prior to the completion of the reaction. The data gathered in this study is the actual measurement of emissions based on the percent styrene in the coating and the application method chosen. It was shown that the non-atomizing applications (such as brushing or roll coating) emit much less than the atomizing application (spraying). Using the data from this study, a Unified Emissions Factor (UEF) table was prepared.

Dura Technologies, Inc. considers this to be the best available science for calculating the emissions of coatings containing styrene monomer. We will therefore report three distinct VOC numbers. The VOC reported in section III of the MSDS is based on 100% evaporation of the styrene. This attachment will report the VOC calculated using the UEF factors for atomized application and non-atomized application.

### **ATOMIZED APPLICATION**

**COATING VOC: 2.21 LB/GAL ( 265.2 GR/LITER)**

**MATERIAL VOC: 2.21 LB/GAL ( 265.2GR/LITER)**

### **NON-ATOMIZED APPLICATION**

**COATING VOC: 1.64 LB/GAL ( 196 GR/LITER)**

**MATERIAL VOC: 1.64 LB/GAL ( 196 GR/LITER)**

For some applications, this product may not be compliant if applied using atomizing techniques. Please consult the AQMD rule that applies to you operation and determine which application method will comply.

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occurs, there is the possibility of violent rupture of sealed containers. Styrene vapors are uninhibited and may form polymers in the vents or flame

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arrestors of storage tanks rendering them useless. These vents should be inspected frequently for blockage. Vapors may cause flash fires. Keep storage containers tightly closed and isolated from heat, electrical equipment, sparks and flames.

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

CONDITIONS TO AVOID

AVOID HEAT, Sparks or open flames. Never allow the PROMOTER/ACCELERATOR to come in direct contact with the CATALYST (When mixed in an undiluted form, cobalt and peroxide will react violently and cause an explosion). Do not use plastic or non-conducting containers to store and handle flammable liquids. These containers can not be properly grounded and static charge may build up in the flammable liquid.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong acids, oxidizers (bleaches), and strong bases (caustic soda).

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

If ignited this product will release carbon dioxide, carbon monoxide, and some organic acids. Do not breath fumes.

HAZARDOUS POLYMERIZATION: MAY OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

WARNING: Based on studies of components similar to the ones used in this coating, it has been shown that Acrolein (TLV:0.1) and Acetaldehyde (TLV: 100 PPM) can be released during the curing of the product.

The excessive inhalation of vapors may cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, and headaches. The symptoms of inhalation exposure are very similar to common complaints caused by colds and other minor medical problems and must be monitored scrupulously to detect the appearance of overexposure.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

EYE CONTACT: This material can be irritating to the eyes. The symptoms of this are tearing, redness, and discomfort. SKIN CONTACT: This material may cause severe skin irritation. Symptoms include redness, burning drying and cracking.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Exposure by skin contact can cause severe skin irritation. Prolonged or repeated exposure may induce redness, burning, and cracking of the skin. Skin absorption is possible but no adverse effects are expected from this route of exposure under normal conditions of handling and use.

INGESTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Swallowing can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of the liquid material can cause pneumonitis which can be FATAL. Care should be taken that such aspiration DOES NOT OCCUR SHOULD THE VICTIM VOMIT.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain and nervous system damage, and liver or kidney atrophy. Intentional misuse by concentrating and inhaling the vapors can be fatal. This material has not been tested as a whole for health effects. WARNING! Although all intentional PROP 65 chemicals will be listed, THERE MAY BE DETECTABLE LEVELS OF UNINTENTIONAL CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM PRESENT IN THIS PRODUCT.

TARGET ORGAN INFORMATION:

Overexposure to this material has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible kidney effects, effects on hearing respiratory tract damage, testis damage, and liver damage. Overexposure to this material has been suggested as a cause of the following effects in humans and may aggravate pre-existing disorders of these organs: central nervous system effects, effects on hearing, respiratory tract damage.

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CARCINOGENICITY:

NTP CARCINOGEN: No   IARC MONOGRAPHS: 2B   OSHA REGULATED: YES

PROPOSITION 65: YES

WARNING: TOLUENE IS AN IMPURITY IN XYLENE. THIS PRODUCT CONTAINS TOLUENE A CHEMICAL KNOWN BY THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

WARNING! THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER STATES THAT STYRENE IS 'POSSIBLY CARCINOGENIC TO HUMANS' (GROUP 2B) BASED ON 'INADEQUATE EVIDENCE' IN HUMANS, 'LIMITED EVIDENCE' IN ANIMALS, AND OTHER 'RELEVANT DATA'. THIS MATERIAL CONTAINS OSHA REGULATED HAZARDOUS MATERIALS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Respiratory problems such as asthma; Skin disorders such as dermatitis; eye disorders or overly sensitive eyes.

EMERGENCY AND FIRST AID PROCEDURES

FOR ANY OVEREXPOSURE MOVE VICTIM TO FRESH AIR AND SEEK MEDICAL AID. EYE CONTACT: Immediately flush eyes with warm clean water. If symptoms persists seek medical attention. SKIN CONTACT: Immediately flush contaminated skin with water using mild soap if necessary. Remove all contaminated clothing and do not reuse clothes until thoroughly clean. INHALATION OVEREXPOSURE: Where breathing has stopped give artificial respiration. If breathing is difficult have qualified persons give medical oxygen. INGESTION: Give victim water to dilute chemical. NEVER induce vomiting in an unconscious or convulsing victim. aspiration of this material may occur during vomiting and can lead to lung damage or death. Seek immediate medical help

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

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate personnel, remove sources of ignition, provide ventilation, equip cleanup crew with safety equipment, contain the spill with dikes, then use an absorbent or vacuum equipment to remove material. Store waste in a sealed container. Use only nonsparking tools during clean up. Do not allow this material to flow into the environment. If the spill exceeds the reportable quantity notify EPA and DOT officials.

WASTE DISPOSAL METHOD

Dispose of in accordance with Local, State and Federal regulations. Closed containers may explode if incinerated and all wastes should be incinerated in approved facilities only. In it's uncatalyzed liquid state this material is a hazardous waste due to it's flammability and should not be released into the environment. The preferred waste management option is to send material that has been declared waste to a licensed or permitted recycler, reclaimer, or incinerator. Use proper waste manifests and permitted haulers for transportation of and material which has been declared a waste. Waste disposal and characterization are the responsibility of the waste generator.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store above 120 deg. F. Store large quantities in buildings designed to comply with Osha, EPA, and local fire department regulations. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. Keep containers closed and upright when not in use to prevent the escape of fumes and liquid into the work or storage area. Inspect containers frequently to detect any possible damage or deterioration which might cause release of the material to the environment. Polymerization of this coating during storage may cause the container to burst explosively. STORE IN COOL DRY AREA.

OTHER PRECAUTIONS

Containers should be grounded when the material is being transferred/mixed to prevent static build up. Empty containers retain all of the hazardous characteristics of the material itself and should be handled carefully until they are thoroughly clean or destroyed. Large quantities of this material

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should be stored only in buildings which conform to OSHA standards. If any materials (such as catalysts, colorants, or thinners)\_ are added to this product read all relevant MSDS as the mixture will retain ALL of the hazardous characteristics of the chemicals added.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

During the application of this product or at any time vapors escape into the work space, exposed persons should use appropriate cartridge respirators (NIOSH/MSHA approved) or in instances of high concentrations, air provided breathing apparatus. Refer to OSHA regulations to maintain workspace safety. If respirators are required, employees must be trained to use the respirators, the fit of the respirator must be tested, and the employee's lung capacity must be tested for ability to use the respirator. Respiratory protection should be used during the curing, cutting, sanding, or polishing of this product. If Respirators are required they must be carefully selected according to the conditions present at customers location.

VENTILATION

Clean air dilution and local exhaust may be used to maintain the vapor concentration below current exposure limits and 20% below the LEL, except in confined areas where forced ventilation may be necessary. Refer to OSHA guidelines for handling these types of materials.

PROTECTIVE GLOVES

Solvent impermeable gloves should be worn to prevent physical contact with the product.

EYE PROTECTION

To protect your eyes, wear safety glasses with side shields, chemical goggles, or face shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Solvent impermeable, protective clothing should be worn to minimize skin contact with this product. Emergency showers and eye wash stations should be provided in the work space. Wear steel toed shoes when handling heavy objects.

WORK/HYGIENIC PRACTICES

Inspect Fire extinguishers at regular intervals. Keep work space clean. Retain safety features on all equipment.

===== SECTION IX - OTHER REGULATORY INFORMATION =====

WHMIS INFO.: CLASS B DIVISION 2

There is 0.266 kilograms per gallon of a polymer which is on the Canadian **NDSL** (Non-Domestic Substance List)in this coating. All other intentional components of this coating are listed in the **Canadian DSL** (Domestic Substance List).

The **HAPS** (Hazardous Air Pollutants) content of this coating is 36.79 wt%.

The total volatile content of this coating is 43.19 wt%

The total non-exempt volatile content of this coating is 43.19 wt%

The intentional components of this coating are listed in the **TSCA** (Toxic Substances Control Act) inventory.

===== SECTION X - DISCLAIMER =====

To the best of our knowledge this MSDS is accurate. To the extent allowed by law, this statement is made in lieu of any other warranties, expressed or implied including but not limited to any implied warranty of merchantability or fitness for a particular purpose and is in lieu of any other obligations or liability on the part of DURA TECHNOLOGIES, INC.