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MSDS SHEET

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SR 203 DLC®-A

Date Revised: November 30, 1999

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SECTION I - PRODUCT IDENTIFICATION

TRADE NAME: SR 203 DLC-A
CHEMICAL NAME: Tetrahydrofurfuryl Methacrylate on Silicon Dioxide

HMIS RATING	
HEALTH	2
FLAMMABILITY	2
REACTIVITY	2

SECTION II - COMPONENTS

COMPONENT NAME	CAS#	PEL	TLV	TWA
Tetrahydrofurfuryl Methacrylate	2455-24-5	a PEL or TLC has not been established		
Silicon Dioxide	7631-86-9	N/DA	N/DA	6mg/m3 (OSHA) 10mg/m3 (ACGIH)

SECTION III - PHYSICAL DATA

Boiling Point: approx. 90°C
Vapor Pressure (mm Hg): N/DA
Vapor Density (Air = 1): N/DA
Solubility in Water: Negligible
Appearance and Odor: Off white, free flowing powder with mild pleasant odor.

Specific Gravity: 1.201 (Calculated)
Percent Volatiles: Negligible
Evaporation Rate: N/DA

SECTION IV - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): Approx. 80°C (PMCC)
FLAMMABLE LIMITS: N/DA
AUTOIGNITION TEMPERATURE: N/DA

EXTINGUISHING MEDIA: Dry chemical, CO₂, foam, water fog, or water spray

SPECIAL FIRE FIGHTING PROCEDURES: Do not enter fire area without proper protection. See Section VII - Hazardous Decomposition Products Possible. Fight fire from safe distance and protected location. Heat and/or impurities may increase temperature, build pressure, rupture closed containers, spreading fire, increasing risk of burns and injuries. Water may be ineffective in firefighting due to low solubility. Use water spray and/or water fog for cooling. Pressure relief system may plug with solids, increasing risk of over-pressure. Notify authorities if liquid enters sewer and/or public waters.

UNUSUAL FIRE & EXPLOSION HAZARDS: High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat and pressure. Closed containers may rupture or explode during runaway polymerization.

MARKETED BY

**HARWICK STANDARD
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SECTION V - HEALTH HAZARD DATA

CHRONIC HEALTH EFFECTS: An epidemiological study was conducted which included 165 precipitated silica workers who had been exposed for an average of 18 years. No adverse effects were noted in complete medical examination (including chest roentgenograms) of these workers. Pulmonary function decrements were correlated only with smoking and age but not with the degree or duration of dust exposure. Laboratory studies have also been conducted in small animals via inhalation to levels of precipitated silica dust of up to 126 mg/m³ for periods from six months to two years. Although precipitated silica was temporarily deposited in the animals lungs, most of the deposited material was cleared soon after the dust exposure ended. The results of all studies performed by, or known to, PPG indicate a very low order of pulmonary activity for synthetic precipitated silica.

PRIMARY ROUTE OF ENTRY- Eye contact, Skin absorption, Skin irritation, & Inhalation

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None.

NTP: No **IARC:** No **OSHA:** No

TOXICITY:	LD50	LC50
Silicon Dioxide	acute oral > 5g/kg	Acute Inhalation: Nuisance dust

EFFECTS OF EXPOSURE-

EYES- Although no appropriate human or animal health effects data are known to exist, this material is expected to cause eye irritation. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils.

SKIN- Although no appropriate human or animal health effects data are known to exist, this material is expected to be a skin irritant and a health hazard by skin absorption.

INHALATION- Nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds. Symptoms of irritation may include coughing, mucous production and shortness of breath.

INGESTION- Although no appropriate human or animal health effects data are known to exist, this material is expected to be a slight ingestion hazard.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- This material or its emissions may defat skin, cause contact dermatitis, or otherwise aggravate existing skin disease. Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection.

SECTION VI - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Immediately rinse with clean water for 20 - 30 minutes. Retract eyelids often. Seek medical attention.

SKIN CONTACT: Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops.

INHALATION: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

INGESTION: If large quantity swallowed, give lukewarm water (pint) if victim completely conscious and alert. Do not induce vomiting if risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

EMERGENCY MEDICAL ATTENTION: Treat burns or allergic reaction conventionally after decontamination. If eye pain, blinking, tears, or redness continue, patient should contact ophthalmologist.

SECTION VII - REACTIVITY DATA

STABILITY: Stable.

MATERIALS TO AVOID- Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers. Avoid alteration of product properties before reuse. Calcining, which may result in crystalline formation or mixing with additives may alter toxicological properties.

CONDITIONS TO AVOID- Avoid high temperatures, localized heat sources (i.e., drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon when burned.

HAZARDOUS POLYMERIZATION: May occur.

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: MINIMIZE SPILL AREA. Vacuum spill material and place in closed plastic bags for disposal. Prevent runoff from entering drains, sewers, or streams. Release can cause fire and/or explosion. May polymerize, releasing heat and gases. Extinguish all ignition sources. Blanket with firefighting foam. Impound and recover large land spill; sweep up small spill. On water, contain and minimize dispersion and collect. Report per regulatory requirements.

WASTE DISPOSAL METHOD: Non-contaminated, properly inhibited product is not a RCRA hazardous waste. However, contaminated product, soil, or water may be RCRA/OSHA hazardous waste due to potential for internal heat generation. (See 40 CFR 261 and 29 CFR 1910). It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste. Comply with all applicable federal, state and local regulations. Use registered transporters. Disposal options include landfilling solids at permitted sites; fuel blending or incinerating liquids. Assure emissions comply with applicable regulations. Dilute aqueous waste may biodegrade; avoid overloading and poisoning plant biomass. Assure effluent complies with applicable regulations.

SECTION IX - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts.

VENTILATION: Provide explosion proof ventilation as required to control airborne dust levels. The sum total of all ingredients may emit vapors during normal processing. All possible health effects are not known and individual sensitivities will vary. Effective exhaust ventilation should always be provided to draw dust, fumes and vapors away from workers to prevent routine inhalation. Ventilation should be adequate to maintain ambient workplace atmosphere below the limits listed in Section V.

PROTECTIVE GLOVES: Impervious gloves to protect against contact with product.

EYE PROTECTION: Safety goggles. Contact lenses should not be worn.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, eye wash station, safety shower.

OTHER WORK PRACTICES: Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION X - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Do not blanket or mix with oxygen-free gas as it renders inhibitor ineffective. Do not store below 32°F, inhibitor can separate as a solid. If frozen, warm and remix material gently (90°F). Prevent moisture contact. Handling can create explosive dust clouds. Eliminate ignition sources, use explosive proof equipment. Conveying and processing equipment should be spark-proof, well bonded and grounded. Avoid dust accumulations. Prevent contamination by foreign materials. Use only non-sparking tools and limit storage time.

OTHER PRECAUTIONS: Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse.

SECTION XI - REGULATORY INFORMATION

TOXIC SUBSTANCE CONTROL ACT (TSCA):

The components of this product are contained on the Inventory of the Toxic Substance Control Act.

CHEMICAL INVENTORIES:

OSHA:

The component(s) listed below is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

INGREDIENT	AMOUNT	ACGIH (TLV)	OSHA (PEL)	UNITS
Silicon Dioxide	28%	10	6	mg/m ³

SARA 313 TOXIC CHEMICALS:

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and the Pollution Prevention Act of 1990.

CAS REGISTRY #	CHEMICAL NAME	PERCENT BY WEIGHT
None.		

This information must be included in all MSDS's that are copied and distributed for this material.

SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for the hazardous components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372

Name of Chemical	Hazard	Percent in Product
Silicon Dioxide	Acute	28%

ADDITIONAL RIGHT-TO-KNOW INFORMATION ON COMPONENTS:

This material contains an inhibitor (HQ MEHQ < etc.) At <1%. The type and amount meet product specifications. Contact a company representative for exact concentration and details on inhibitor level maintenance.

TRANSPORTATION INFORMATION:

DOT Shipping Name: Not regulated.
DOT Identification Number:

SECTION XII - OTHER INFORMATION

Revision Note: New issue of raw material MSDS.

Prepared by: James L. Pye, Jr.

Title: Safety Coordinator

N/A = Not applicable N/D = Not determined N/DA = No Data Available N/E = Not established

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