

MATERIAL SAFETY DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME OR NUMBER: **HMS 20-07.12 ANTI-OXIDANT COATING**
Coating Solution

MANUFACTURER: HITCO Carbon Composites, Inc.
ADDRESS: 1600 W. 135th Street, Gardena, CA 90249
GENERAL ASSISTANCE: (310) 527-0700
24-HOUR EMERGENCY ASSISTANCE: CHEMTREC Assist: (800) 424-9300

DATE OF PREPARATION OR LAST CHANGE: July 23, 2002

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

<u>CHEMICAL/ COMMON NAME</u>	<u>C.A.S. NUMBER</u>	<u>% BY WEIGHT</u>	<u>EXPOSURE GUIDELINES</u>
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A proprietary phenolic resin anti-oxidant coating. Identity, CAS Numbers, and/or percent composition are trade secrets.

See Section 8 for Exposure Guidelines

SECTION 3 HEALTH HAZARD IDENTIFICATION

PRIMARY ROUTES OF ENTRY

EYE: Severely irritating. Direct contact may cause irritation, corneal edema, and possibly corneal opacity.

SKIN: Moderate to severely irritating. Absorption from skin contact may cause poisoning. Exposure may cause symptoms similar to those listed under "Ingestion". Repeated or prolonged exposure may cause dryness, redness, itching, and inflammation. Dermatitis and/or allergic sensitization may occur in some individuals.

INGESTION: Ingested product may be corrosive to mouth, throat, and stomach, and cause harmful central nervous system effects. Effects may include excitation, euphoria, dizziness, drowsiness, blurred vision, headache, fatigue, tremors, convulsions, loss of consciousness, coma, and respiratory arrest and death. Product may also cause tinnitus, cyanosis, cerebral edema, and liver or kidney damage

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INHALATION: Inhalation may cause irritation of the respiratory tract. Other effects may include coughing, shortness of breath, and symptoms similar to those listed under “Ingestion”.

CARCINOGEN LISTINGS: IARC has determined that there is inadequate evidence for the carcinogenicity of amorphous silica to experimental animals and humans (IARC Class – 3B). IARC has found limited evidence for the carcinogenicity of formaldehyde in humans but sufficient evidence of carcinogenicity in experimental animals. The Occupational Health and Safety Administration (OSHA) has designated formaldehyde as a carcinogen defined with no further categorization. The American Conference of Governmental Industrial Hygienists (ACGIH) classifies formaldehyde as a suspected human carcinogen (TLV - A2).

SECTION 4 FIRST AID MEASURES

EMERGENCY/FIRST AID PROCEDURES

EYE: Flush eyes with large amounts of water for 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical attention if irritation persists.

SKIN: Quickly remove contaminated clothing. Thoroughly wash exposed area of skin with soap and water. Rinse with flooding amounts of water. For reddened or blistered skin seek medical attention.

INGESTION: **DO NOT INDUCE VOMITING.** Contact a poison control center. If victim is conscious, give 1 – 3 glasses water or milk to dilute stomach contents. Get medical attention immediately. Keep affected person warm and at rest. Gastric lavage with activated charcoal may be used by a physician to prevent absorption.

INHALATION: In case of overexposure, immediately move person from contaminated area to fresh air at once and support breathing as needed. Get medical attention immediately. If breathing difficulties occur, administer oxygen until medical assistance can be rendered. Keep affected person warm and at rest.

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SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

Use dry chemical, alcohol foam, all purpose Aqueous Film Forming Foam (AFFF), or carbon dioxide to extinguish fire. Water may be ineffective but should be used to cool fire exposed containers, structures, and to protect personnel. If leak or spill has not ignited, ventilate area and use water spray to disperse vapors and to protect personnel attempting to stop leak. Use water to dilute spills and to flush away from sources of ignition. Do not flush down public sewers or other drainage systems.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

Product is dangerous when exposed to heat or flame. Fire may produce poisonous or irritating gas, fumes, or vapors. Exposed firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus with full-face mask and full protective equipment.

Vapors form flammable or explosive mixtures with air at room temperature. Vapors may concentrate in confined spaces. Vapors may spread to distant ignition source and flash back.

FLASH POINT: 26.7°C (80°F)

FLAMMABILITY LIMITS: NA

LOWER EXPLOSIVE LIMIT: ND

UPPER EXPLOSIVE LIMIT: ND

AUTO IGNITION TEMPERATURE: NA

SECTION 6 ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS

Take immediate steps to stop and contain spill. Caution should be used regarding personnel safety and exposure to the spilled material. Small spills may be diluted with water and mopped up or absorbed with noncombustible absorbent material or other absorbent known to be compatible. For large spills, dike area far ahead of spill for later cleanup and disposal.

NOTIFICATION INFORMATION

This material contains one or more constituents regulated as hazardous substances under U.S. Federal Law. The reportable quantity (RQ) of this material is 1,300 pounds, calculated on the basis of the regulated constituent providing the lowest RQ according to the following formula:

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Constituent RQ/% in Material

Any spill, release, or substantial threat of release, of this material to the air, water and/or land in an amount equal to or in excess of the RQ in any 24 hour period, must be reported immediately to the National Response Center (800-424-8802); in Washington, D.C. (202-426-2675), unless the release results in exposure to persons solely within the boundaries of the facility.

In addition, under the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355) any release of this material to the air, water and/or land in an amount equal to or in excess of the RQ must be reported to the State Emergency Response Commission(s) and Local Emergency Planning Committee(s) likely to be affected by the release, unless the release is federally permitted or the release results in exposure to persons solely within the boundaries of the facility. In the event there is no Local Emergency Planning Committee, notification shall alternatively be made to the relevant local emergency response personnel.

SECTION 7 HANDLING AND STORAGE

HANDLING AND STORAGE PROCEDURES

Use good personal hygiene. Do not eat, drink, apply cosmetics or smoke in areas of use or storage. Wash hands and face thoroughly after handling and before eating, drinking or smoking.

Contaminated work clothes should not be brought home. A sensitized employee should not be exposed to the material which causes the sensitization.

Store at ambient or lower temperature. Shelf life – 6 months.

Empty containers may contain toxic or corrosive residue or vapors.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS/WORK PRACTICES

VENTILATION:

Control airborne concentrations below the exposure guidelines specified by the Occupational Safety and Health Administration (OSHA) or other local, state and federal regulations.

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PERSONAL PROTECTIVE EQUIPMENT/PROTECTIVE MEASURES

RESPIRATORY PROTECTION:

Use in well ventilated areas. Respiratory protection is not normally necessary. If exposure limits may possibly exceed the TLV or respiratory irritation is experienced, NIOSH approved respiratory protection should be worn. An industrial hygienist or other qualified professional should be consulted during the respirator selection process to assure that the respiratory protection used is appropriate under the conditions of use. A respiratory protection program that meets OSHA's 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.

PROTECTIVE CLOTHING:

Avoid skin contact. Wear appropriate chemical protective gloves and protective clothing such as armcovers or aprons.

EYE PROTECTION:

Avoid eye contact with this material. Wear chemical goggles. Do not wear contact lenses when working with this substance. Do not touch the eyes with contaminated skin or materials. Provide an eye wash station in the work area.

OTHER PROTECTIVE EQUIPMENT:

Depending on conditions, additional protection may be necessary such as face shield, apron, armsleeves, or other protective clothing.

EXPOSURE GUIDELINES:

A proprietary phenolic resin anti-oxidant coating:

Ethyl Alcohol	PEL	1,000 ppm (1,900 mg/m ³) (OSHA)
	TLV	1,000 ppm (1,900 mg/m ³) (ACGIH)
Methanol	PEL	200 ppm, STEL 250 ppm (OSHA)
	TLV	200 ppm, STEL 250 ppm (ACGIH)
Isopropanol (IPA)	PEL	400 ppm (980 mg/m ³); STEL 500 ppm (1,230 mg/m ³) (OSHA)
	TLV	400 ppm (983 mg/m ³); STEL 500 ppm (1,230 mg/m ³) (ACGIH)
		Ceiling 800 ppm 15-minute (NIOSH)
Methyl Isobutyl Ketone	PEL	100 ppm (410 mg/m ³)
	TLV	50 ppm (205 mg/m ³); STEL 75 ppm (307 mg/m ³) (ACGIH)

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Amorphous Silica	PEL 6 mg/m ³ (total) (OSHA) TLV 10 mg/m ³ (total) (ACGIH)
Nuisance Dust	PEL 5 mg/m ³ (resp.), 15 mg/m ³ (total) (OSHA) TLV 10 mg/m ³ (total) (ACGIH)
Formaldehyde	PEL 0.75 ppm, STEL 2 ppm (OSHA) TLV Ceiling 0.3 ppm (ACGIH) TWA 0.016 ppm, 15-minute Ceiling 0.1 (NIOSH)
Phenol	PEL (Skin) 5 ppm (19 mg/m ³) (OSHA) TLV (Skin) 5 ppm (19 mg/m ³) (ACGIH) TWA 5 ppm (19 mg/m ³), 15-minute Ceiling (Skin) 15.6 ppm (60 mg/m ³) (NIOSH)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Brown. Paint-like liquid

SPECIFIC GRAVITY (water=1): 1.350 – 1.400

VAPOR PRESSURE: ND

VAPOR DENSITY (air=1): ND

VISCOSITY: 14.000 – 15.000 SEC (Zahn Cup #3); Brookfield Vis. 1640 CPS

MELTING POINT: NA

BOILING POINT: NA

EVAPORATION RATE (water=1): > 1

% VOLATILE BY VOLUME: 47.30

SOLUBILITY IN WATER: 0%

pH: NA

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SECTION 10 STABILITY AND REACTIVITY

STABILITY:

Exposure to heat greater than 180°F will cause rapid polymerization via condensation reaction. Thermal decomposition products may be hazardous.

INCOMPATIBILITY:

Incompatible with strong acids, bases, and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition may be hazardous and may include carbon monoxide, carbon dioxide, and hydrogen cyanide. Formaldehyde gas and unknown organic compounds may be produced.

HAZARDOUS POLYMERIZATION: See STABILITY

SECTION 11 DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD

This substance, when discarded or disposed of, is a hazardous waste according to Federal regulations (40 CFR 261). It is listed as Hazardous Waste Code D001 due to its flammability.

The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with all applicable Federal, state, and local regulations.

SECTION 12 TRANSPORTATION INFORMATION

DOT INFORMATION

HAZARD CLASS: Flammable Liquid

PROPER SHIPPING NAME: Coating Solution

LABELS REQUIRED: Flammable Liquid

PLACARDS REQUIRED: Flammable Liquid

BILL OF LADING DESCRIPTION: Product Name

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UN/NA CODE: UN 1193

Packaging Group: III

SECTION 13 REGULATORY INFORMATION

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL) Inventory.

The Canadian Workplace Hazardous Materials Information System (WHMIS) Other Toxic Effects category applies to this product.

SARA TITLE III INFORMATION

This product is classified as an Immediate Hazard, a Delayed Hazard, and as a Fire Hazard under the hazard categories of the Superfund Amendments and Reauthorization Act (SARA) Section 311/312 (40 CFR 370).

This product contains toxic chemicals (in excess of the applicable de minimis concentrations) that are subject to the annual toxic chemical release reporting requirements of SARA Section 313 (40 CFR 372).

<u>Component</u>	<u>CAS Number</u>	<u>Maximum %</u>
Formaldehyde	50-00-0	2.9
Methanol	67-64-1	1.2
Phenol	108-95-2	1.3

This product contains formaldehyde and phenol which are listed as Hazardous Air Pollutants under Section 112 of the Clean Air Act and are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42 with reference to Appendix D, Table II-V).

OTHER REGULATORY INFORMATION

Formaldehyde and phenol are listed as extraordinary hazardous substances as defined in the Massachusetts Right-To-Know Law, Department of Health, Chapter 105, Section 670.005.

Formaldehyde is listed as a special hazardous substance as defined in Pennsylvania Right-To-Know Law, Section 3800.

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PROPOSITION 65 INFORMATION

Formaldehyde is a listed chemical subject to the State of California Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986.

SECTION 14 OTHER APPLICABLE INFORMATION

Persons with pre-existing skin and respiratory disorders may be more susceptible to the effects of this product.

REVISION DATE: July 23, 2002 REPLACES SHEET DATED: November 6, 1997
COMPLETED BY: CLAYTON GROUP SERVICES, INC.

NOTICE TO USERS: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Data Safety Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vender for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.