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Section 1 MATERIAL IDENTITY

PRODUCT NAME: BC 501 GRAPHITE INSULATION COATING

MANUFACTURER INFORMATION:

BAY COMPOSITES, INC.
1801 JARMAN STREET
ESSEXVILLE, MI 48732
UNITED STATES

NON EMERGENCY PHONE NUMBER: 989-891-9155 EXT 10
EMERGENCY PHONE NUMBER: 989-239-5831

DATE SDS PREPARED: MAY 1, 2015

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER!
TOXIC IF SWALLOWED, EYE IRRITANT, FLAMMABLE. BLACK LIQUID ALCOHOL ODOR.

ROUTE OF ENTRY: [SKIN] YES
ROUTE OF ENTRY: [INGESTION] YES
ROUTE OF ENTRY: [INHALATION] YES

HEALTH HAZARDS: ACUTE AND CHRONIC

LIQUID FURFURYL ALCOHOL AND HIGH CONCENTRATIONS OF VAPORS MAY BE HIGHLY IRRITATING TO THE EYES, SKIN, MUCOUS MEMBRANES AND RESPIRATORY TRACT.

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EYE:	WILL CAUSE EYE IRRITATION. THE VAPOR AND THE LIQUID MAY CAUSE BURNING, INTENSE IRRITATION AND EXCESSIVE WATERING OF THE EYE.
SKIN CONTACT:	REPEATED OR PROLONGED SKIN CONTACT MAY RESULT IN MILD IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. REPEATED OR PROLONGED CONTACT MAY CAUSE DEFATTING OF THE SKIN RESULTING IN DRYNESS, CRACKING AND DERMATITIS.
INHALATION:	VAPOR MAY BE IRRITANT TO THE RESPIRATORY TRACT. THE VAPOR HAS ANESTHETIC PROPERTIES AND WHEN INHALED AT CONCENTRATIONS ABOVE THE OCCUPATIONAL EXPOSURE LIMIT, IT MAY CAUSE RESPIRATORY IRRITATION, HEADACHE, FATIGUE, DIZZINESS AND INCOORDINATION. AVOID BREATHING VAPORS OR MISTS.
INGESTION:	MAY CAUSE IRRITATION OF MOUTH, THROAT AND DIGESTIVE TRACT AND DEPRESSION OF THE CENTRAL NERVOUS SYSTEM. SLIGHTLY TOXIC. INGESTION MAY CAUSE SIGNS OF ALCOHOLIC INTOXICATION, THE SYMPTOMS OF WHICH INCLUDE IMPAIRED SENSORY FUNCTION; MUSCULAR INCOORDINATION; CHANGES IN MOOD, PERSONALITY AND BEHAVIOR; AND IMPAIRED MENTAL ACTIVITY. HIGH LEVELS WILL PRODUCE DEEP COMA AND POSSIBLY DEATH. MAY CAUSE NAUSEA, VOMITING AND DIARRHEA. ASPIRATION INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS, WHICH CAN BE FATAL.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	CONCENTRATION (% BY WEIGHT)
ISOPROPANOL	67-63-0	60-100%
GRAPHITE	7782-42-5	10-30
n-Butyl Alcohol	71-36-3	1-5
PROPYLENE GLYCOL METHYL ETHER	107-98-2	1-5

4. FIRST AID MEASURES

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EYE:	IMMEDIATELY IRRIGATE WITH EYEWASH SOLUTION OR CLEAN WATER, HOLDING THE EYELIDS APART FOR AT LEAST 15 MINUTES. OBTAIN IMMEDIATE MEDICAL ATTENTION.
SKIN CONTACT:	WASH SKIN WITH SOAP AND WATER. IF SYMPTOMS DEVELOP, OBTAIN MEDICAL ATTENTION.
INHALATION:	REMOVE TO FRESH AIR. GET MEDICAL ATTENTION IF IRRITATION PERSISTS.
INGESTION:	DO NOT ATTEMPT TO GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF SWALLOWED, DO NOT INDUCE VOMITING. KEEP AT REST. ASPIRATION INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS, WHICH CAN BE FATAL. IF INDIVIDUAL IS CONSCIOUS, GIVE WATER TO DILUTE STOMACH CONTENTS. GET PROMPT MEDICAL ATTENTION.

5. FIREFIGHTING MEASURES

AUTOIGNITION:	398.8 DEGREE C
FLASH POINT:	11.6 DEGREE C 52.9 DEGREE F
EXTINGUISH MEDIA:	ALCOHOL FOAM, WATER SPRAY OR FOG. CO2, DRY CHEMICAL. DO NOT USE DIRECT WATER STREAM ON BURNING LIQUID.
SPECIAL FIREFIGHTING PROCEDURES:	A SELF CONTAINED BREATHING APPARATUS AND SUITABLE PROTECTIVE CLOTHING SHOULD BE WORN IN FIRE CONDITIONS; COOL EXPOSED EQUIPMENT WITH WATER SPRAY.
FIRE AND EXPLOSION HAZARDS:	DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. COMBUSTION WILL EVOLVE TOXIC AND IRRITANT VAPORS. THE VAPOR OF THIS PRODUCT CAN FORM POTENTIALLY EXPLOSIVE MIXTURES WITH AIR. THE VAPOR IS HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASHBACK. CONTAINERS CAN BUILD UP PRESSURE IF EXPOSED TO HEAT (FIRE) AND MAY EXPLODE.
HAZARDOUS COMBUSTION PRODUCTS:	CARBON MONOXIDE, CARBON DIOXIDE, UNKNOWN HYDROCARBONS.
LOWER EXPLOSION LIMIT (%)	2.0% VOL
UPPER EXPLOSION LIMIT (%)	12.0% VOL

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES:	VENTILATE AREA, NIOSH APPROVED RESPIRATOR IF REQUIRED. SELF-CONTAINED
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BREATHING APPARATUS IN EMERGENCY AND NON-ROUTINE SITUATIONS. NO SMOKE, FLAMES OR FLARES IN HAZARD AREA. KEEP UNNECESSARY PEOPLE AWAY; ISOLATE HAZARD AREA AND DENY ENTRY. PROVIDED IS SAFE TO DO SO; ISOLATE THE SOURCE OF THE LEAK. DO NOT ALLOW TO ENTER DRAINS, SEWERS OR WATERSOURCES. CONTAIN THE SPILLAGE AND PUMP UP AS MUCH AS POSSIBLE. ABSORB THE REMAINING MATERIAL ON SAND, SAWDUST, ETC. FOR LANDFILL OR INCINERATION. SCRAPE ABSORBED MATERIAL INTO PROPER WASTE CONTAINERS. WASH AREA WITH SOAP AND WATER; PREVENT ENTRY OF WASH WATER INTO DRAINS OR OTHER WATERWAYS. DISPOSE OF WASTES AND WATER IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

FOR SAFETY AND ENVIRONMENTAL PRECAUTIONS, PLEASE REVIEW ENTIRE MSDS FOR NECESSARY INFORMATION.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE:	<90 DEGREE F
HANDLING STORAGE:	KEEP AWAY FROM HEAT, SOURCES OF IGNITION AND DIRECT SUNLIGHT. KEEP CONTAINERS PROPERLY SEALED WHEN NOT IN USE. KEEP IN WELL VENTILATED PLACES. STORE IN A COOL, DRY AREA AWAY FROM HEAT, SPARKS OR FIRE. ALL HANDLING EQUIPMENT MUST BE PROPERLY GROUNDED. KEEP AWAY FROM OXIDIZING AGENTS. EXPLOSIVE WHEN MIXED WITH OXIDIZING SUBSTANCES. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUE. FOLLOW MSDS AND LABEL WARNINGS EVEN AFTER THEY HAVE BEEN EMPTIED.
SENSITIVITY TO STATIC ELECTRICITY:	YES
SPECIAL SENSITIVITY:	AVOID EXCESSIVE HEAT
SENSITIVITY TO MECHANICAL IMPACT:	NO
OTHER PRECAUTIONS:	GROUND CONTAINERS SECURLY WHEN TRANSFERRING CONTENTS. WEAR LOW STATIC OR PROPERLY GROUNDED SHOES. ALL HANDLING EQUIPMENT MUST BE PROPERLY GROUNDED. THIS MATERIAL SHOULD NOT BE SPILLED, DUMPED OR FLUSHED

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INTO SEWERS OR PUBLIC
WATERWAYS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	EXPOSURE LIMITS		
	ACGIH	OSHA	MFG WORKING STANDARD
ISOPROPANOL	400 PPM STEL 200 PPM TWA	400 PPM TWA: 980 mg/m ³ TWA	
GRAPHITE	2 mg/m ³ TWA (respirable fraction, all forms except graphite fibers)	15 mppcf TWA	
n-Butyl ALCOHOL	70 ppm TWA	100 ppm TWA: 300 mg/m ³ TWA	
PROPYLENE GLYCOL MENTHYL ETHER	150 ppm STEL 100 ppm TWA		

VENTILATION REQUIREMENTS: USE IN WELL VENTILATED AREA. EXPLOSION PROOF EXHAUST VENTILATION. PROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PUBLISHED EXPOSURE LIMITS.

EYE PROTECTION REQUIREMENTS: SAFETY GLASSES, GOGGLES OR FACE SHIELD TO PROTECT AGAINST SPLASHING. EYE WASHING EQUIPMENT MUST BE PROVIDED AT HANDLING POINTS.

GLOVE REQUIREMENTS: IMPERVIOUS NEOPRENE OR RUBBER GLOVES RECOMMENDED.

CLOTHING REQUIREMENTS: APPROPRIATE PROTECTIVE CLOTHING AND EQUIPMENT IS RECOMMENDED TO MINIMIZE SKIN CONTACT WITH THIS SUBSTANCE. UNIFORMS, COVERALLS, OR A LAB COAT SHOULD BE WORN.

CHANGE/REMOVAL OF CLOTHING: REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE.

WASH REQUIREMENTS: WASH EXPOSED AREAS WITH SOAP AND WATER. SHOWERS AND EYE WASHING EQUIPMENT MUST BE PROVIDED AT HANDLING POINTS.

RESPIRATOR REQUIREMENTS: WHERE SUITABLE ENGINEERING CONTROLS ARE NOT FITTED OR ARE INADEQUATE, WEAR SUITABLE PROTECTIVE EQUIPMENT. NIOSH APPROVED RESPIRATOR IF REQUIRED. SELF-CONTAINED BREATHING APPARATUS IN EMERGENCY AND NON-ROUTINE SITUATIONS.

9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR MIXTURE:	MIXTURE
PHYSICAL FORM:	LIQUID
COLOR:	BLACK
ODOR:	ALCOHOL
ODOR THRESHOLD:	7.5 ppm
MOLECULAR WEIGHT:	NA
PH AS IS	NA
OXIDIZING PROPERTIES:	NA
BOILING POINT:	82 DEGREE C
MELTING /FREEZING POINT:	-88.8 DEGREE C
SOFTENING POINT:	NA
SOLUBILITY IN WATER:	SOLUABLE
PARTITION COEFFICIENT:	-0.14
VISCOSITY:	200- 800 cPs 25 DEGREE C
SPECIFIC GRAVITY (WATER =1)	.89
BULK DENSITY:	7.4 LB/GAL
EVAPORATION RATE:	2.9 (n-Butyl ACETATE =1)
VAPOR PRESSURE (mmHg):	33 mm Hg
VAPOR DENSITY (AIR = 1):	2.07
VOLATILES:	75-85%/wt
VOLATILE ORGANIC COMPOUNDS:	710 g/liter
AUTOIGNITION:	398.8 DEGREE C
FLASHPOINT:	11.6 DEGREE C (TAGLIABUE CLOSED TESTER) 52.9 DEGREE F (TAGLIABUE CLOSED TESTER)

10. STABILITY AND REACTIVITY

STABILITY:	STABLE
STABILITY DETAIL:	MATERIAL IS STABLE UNDER NORMAL EMPERATURES AND PRESSURES.
MATERIALS TO AVOID:	STRONG OXIDIZERS, ALDEHYDES, STRONG ACIDS.
CONDITIONS TO AVOID:	AVOID HIGH TEMPERATURES, OXIDIZING SUBSTANCES
HAZARDOUS DECOMPOSITION PRODUCTS:	THERMAL DECOMPOSITION PRODUCTS ARE HAZARDOUS AND/OR TOXIC. CARBON MONOXIDE, CARBON DIOXIDE, UNKNOWN HYDROCARBONS
HAZARDOUS POLYMERIZATION CONDITIONS:	NA

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REACTIVITY:

CAN FORM PEROXIDES ON CONTACT WITH AIR.

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY

EYE CONTACT, SKIN CONTACT, INHALATION, INGESTION

CARCINOGEN:

IARC (GROUP)

NTP

OSHA

There is no evidence that this product poses a carcinogenic risk under normal conditions of handling and use.

PRODUCT TOXICOLGY PRODUCT INFORMATION:

HIGH EXPOSURES BY INHALATION MAY PRODUCE ANESTHETIC EFFECTS. ATMOSPHERIC CONCENTRATIONS IN EXCESS OF THE OCCUPATIONAL EXPOSURE LIMIT MAY LEAD TO HEADACHE, NAUSEA, AND IRRITATION OF THE EYES, NOSE AND THROAT.

ACUTE SHORT TERM EFFECTS OF EXPOSURE

EFFECTS OF ACUTE EXPOSURE:

CAUSES SEVERE EYE IRRITATION. MILD IRRITANT TO SKIN. VAPOR OR AEROSOL, IF GENERATED, CAN CAUSE IRRITATION OF THE EYES, NOSE AND RESPIRATORY TRACT.

EFFECTS OF CHRONIC EXPOSURE:

PROLONGED OR FREQUENT BREATHING OF EXCESS DUST MAY CAUSE AN ADVERSE RESPIRATORY EFFECT.

12. ECOLOGICAL INFORMATION

Ecological Information

ECOTOXICITY:

THIS PRODUCT IS BIODEGRADABLE UNDER AEROBIC AND ANAEROBIC CONDITIONS.

THIS PRODUCT IS SOLUABLE IN WATER AND READILY BIODEGRADABLE. THE PRODUCT HAS LOW POTENTIAL FOR BIOACCUMULATION. THIS PRODUCT IS NOT HARMFUL TO AQUATIC ORGANISMS.