

MATERIAL SAFETY DATA SHEET

DATE: March 22, 1996

Product ID # 935 Identity (As used in label and list) ASZM TEDA 12X30 250

Customer, Name Invoice Number

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name: CALGON CARBON CORPORATION Emergency Phone Number: (412) 787-6700

Address: P.O. BOX 717, PITTSBURGH, PA 15230-0717

Chemical Name and Synonyms: CARBON IMPREGNATED WITH COPPER, ZINC, TEDA, SILVER AND MOLYBDENUM Formula: C, Cu, ZnO, C6H12N2, Mo, Ag

Proper shipping Name: SELF-HEATING, SOLID, ORGANIC, n.o.s. (CONTAINS TRIETHYLENEDIAMINE)

DOT Hazard Class: 4.2

DOT Identification Number: UN 3088

Packing Group: III

Date Prepared: 9/23/94 Prepared by: S. L. Liller

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	% (BY WEIGHT)	CAS #	: Exposure Guidelines:	
			OSHA PEL *	ACGIH TLV *
CARBON 10mg/M3	<89	7440-44-0	5mg/M3 (Resp.)	(total)
COPPER (Dust)	<6	7440-50-8	1mg/M3 (Dust)	1mg/M3
ZINC OXIDE	<6	1314-13-2	5mg/M3 (Dust)	10mg/M3 (Total)
TRIETHYLENEDIAMINE (TEDA)	<4	280-57-9	N/A	N/A
MOLYBDENUM	<3	7439-98-7	5mg/M3	5mg/M3
SILVER	<0.1	7440-22-4	0.01 mg/M3 as Ag	0.01 mg/M3 as Ag

[*PELs and TLVs are 8-hour TWAs unless otherwise noted.]
 * TESTING OF A SIMILAR PRODUCT (WITHOUT ZINC OXIDE, TEDA, AND MOLYBDENUM) INDICATES THE ORAL LD50 (RAT) WOULD BE 10.8g/Kg WITH 95% CONFIDENCE LIMITS OF 7.41 AND 15.7g/Kg. THE ADDITION OF THE IMPREGNANTS TO THE PRODUCT IS NOT EXPECTED TO CHANGE THIS VALUE APPRECIABLY

Attachment 005 Continued
6 pgs

SECTION III - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

BLACK PARTICULATE SOLID, PELLET OR POWDER. CONTACT MAY CAUSE EYE IRRITATION. DUST MAY BE SLIGHTLY IRRITATING TO EYES AND RESPIRATORY TRACT.

CAUTION!!

WET ACTIVATED CARBON REMOVES OXYGEN FROM AIR CAUSING A SEVERE HAZARD TO WORKERS INSIDE CARBON VESSELS AND ENCLOSED OR CONFINED SPACES. BEFORE ENTERING SUCH AN AREA, SAMPLING AND WORK PROCEDURES FOR LOW OXYGEN LEVELS SHOULD BE TAKEN TO ENSURE AMPLE OXYGEN AVAILABILITY; OBSERVING ALL LOCAL, STATE AND FEDERAL REGULATIONS.

POTENTIAL HEALTH EFFECTS

Effects and Hazards of Eye Contact:

THE PHYSICAL NATURE OF THE PRODUCT MAY PRODUCE EYE IRRITATION. THE PURE TEDA MATERIAL IS A PRIMARY EYE IRRITANT (16 CFR 1500.42).

Effects and Hazards of Skin Contact:

THE PRODUCT IS NOT A PRIMARY SKIN IRRITANT. THE PRIMARY SKIN IRRITANT INDEX (RABBIT) IS 0. THE ASZM-3T ACTIVATED CARBON IS NOT EXPECTED TO BE A PRIMARY SKIN IRRITANT.

Effects and Hazards of Inhalation (Breathing):

A ONE-HOUR ACUTE INHALATION EXPOSURE OF RATS TO A SIMILAR PRODUCT (WITHOUT ZINC OXIDE, TEDA, AND MOLYBDENUM) AT A NOMINAL CONCENTRATION OF 56mg/L AND A MEAN AIRBORNE CONCENTRATION OF 9.7mg/L DID NOT PRODUCE MORTALITY. THE ACUTE INHALATION TOXICITY LC50 FOR THE PURE TEDA IS 4mg/L IN RATS. THE ASZM-3T PRODUCT IS EXPECTED TO BE PRACTICALLY NON-TOXIC THROUGH INHALATION

Effects and Hazards of Ingestion (Swallowing):

THE ORAL LD50 (RAT) FOR A SIMILAR PRODUCT (WITHOUT ZINC OXIDE, TEDA AND MOLYBDENUM) WOULD BE 10.6g/Kg WITH 95% CONFIDENCE LIMITS OF 7.41 AND 15.7g/Kg. THE ADDITION OF THE IMPREGNANTS TO THE PRODUCT IS NOT EXPECTED TO APPRECIABLY CHANGE THIS VALUE FOR ASZM-3T PRODUCT.

Primary Routes of Entry:

INHALATION, INGESTION, SKIN CONTACT, EYE CONTACT.

Chronic Effects:

CARCINOGENICITY: NTP: N/A IARC: N/A OSHA REGULATED: YES

SECTION IV - FIRST AID MEASURES

Treatment For Eye Contact:
FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

Treatment for Skin Contact: WASH WITH SOAP AND WATER

Treatment for Inhalation (Breathing): N/A

Treatment for Ingestion (Swallowing): N/A

Subchronic, Chronic, other:

THE EFFECTS OF LONG-TERM, LOW-LEVEL EXPOSURES TO THIS PRODUCT HAVE NOT BEEN DETERMINED. SAFE HANDLING OF THIS MATERIAL ON A LONG-TERM BASIS SHOULD EMPHASIZE THE AVOIDANCE OF ALL EFFECTS FROM REPETITIVE ACUTE EXPOSURES.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A Limits: Lel: N/A Uel: N/A

Extinguishing Media:
FLOOD WITH PLENTY OF WATER.

Special Firefighting Procedures: WEAR SELF-CONTAINED BREATHING APPARATUS DUE TO POTENTIAL CARBON MONOXIDE/NITROGEN OXIDE GENERATION.

Unusual Fire and Explosion Hazards:
CONTACT WITH STRONG OXIDIZERS SUCH AS OZONE, LIQUID OXYGEN, CHLORINE, PERMANGANATE, ETC. MAY RESULT IN FIRE. DUE TO METALS ON THE CARBON, THIS CATALYTIC REACTION IS ACCELERATED FOR THE ASZM-3T DUST OR FINES.

NFPA RATING: HEALTH = 0 REACTIVITY = 0 FLAMMABILITY = 1

VI - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken In Case material is Released or Spilled:
SWEEP UP UNUSED CARBON AND DISCARD IN REFUSE CONTAINER OR REPACKAGE. IF RELEASED, REPORT IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

Waste Disposal Method: DISPOSE OF UNUSED CARBON IN REFUSE CONTAINER. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

Precautions for Handling and Storage: THE ASZM-3T PRODUCT DUST OR FINES IS MORE SUSCEPTIBLE TO CATALYTIC REACTION THAN THE LARGE MESH PRODUCT. AVOID GENERATION OF DUST AND FINES DURING HANDLING.

Other Precautions: WASH THOROUGHLY AFTER HANDLING. EXERCISE CAUTION IN THE STORAGE AND HANDLING OF ALL CHEMICAL SUBSTANCES. FINES GENERATED BY ATTRITION DURING HANDLING OF THE ASZM-3T PRODUCT GENERALLY CONTAIN A HIGHER LEVEL OF IMPREGNANT THAN THE ACTUAL PRODUCT. HAZARDOUS CONDITIONS MAY BE ACCENTUATED.

SECTION VII - CONTROL MEASURES

Respiratory Protection:

A NIOSH APPROVED PARTICULATE FILTER RESPIRATOR IS RECOMMENDED IF EXCESSIVE DUST IS GENERATED.

Ventilation:

LOCAL EXHAUST VENTILATION: RECOMMENDED

Mechanical Ventilation: RECOMMENDED

Protective Gloves:	Eye Protection:	other Protective Equipment:
RUBBER GLOVES RECOMMENDED	SAFETY GLASSES OR GOGGLES RECOMMENDED	NOT REQUIRED

SECTION VIII - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A | Specific Gravity: 2.3g/cc real density

Vapor Pressure: N/A | Melting Point: N/A

Vapor Density: N/A | Evaporation Rate: N/A

Solubility in Water: NEGLIGIBLE | Packing Density: 0.4 to 0.7g/cc

Appearance and Odor: BLACK PARTICULATE SOLID, PELLETT OR POWDER

SECTION IX REACTIVITY DATA

Stability: STABLE | Conditions to avoid : NONE

Incompatibility (Materials to avoid):
STRONG OXIDIZERS SUCH AS OZONE, LIQUID OXYGEN, CHLORINE, PERMANGANATE, ETC.

Hazardous Decomposition Products:
COMBUSTION OF THIS MATERIAL MAY RESULT IN THE GENERATION OF CARBON MONOXIDE AND NITROGEN OXIDES.

Hazardous Polymerization: UNSPECIFIED

Polymerizing Conditions to Avoid: NONE

SECTION X - REGULATORY INFORMATION

SARA TITLE III: THE PRESENCE OF COPPER AND ZINC (ZINC COMPOUNDS)
SUBJECT TO REPORTING REQUIREMENTS.

OSHA: THIS PRODUCT IS CONSIDERED AN AIR CONTAMINANT DUE TO THE PRESENCE OF COPPER, ZINC, AND MOLYBDENUM.

TSCA: THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY LIST.

CANADA

WHMIS CLASSIFICATION: NOT CLASSIFIED

DSL: THE INGREDIENTS OF THIS PRODUCT ARE ON THE DOMESTIC SUBSTANCES LIST

While this information and recommendations set forth herein are believed to be accurate as of the date hereof, CALGON CARBON CORPORATION MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

END OF MATERIAL SAFETY DATA SHEET

04/23/2001

Excerpt from the test report. TCLP test of ASZM - 3T Charcoal.

Test report: 294538
Faxed to APG on 6 Apr 95

Sample Identification: 155-5-R3330C
Date and time taken 03-22-95
Sample Matrix : Solid

<u>Parameter</u>	<u>Results</u>	<u>units</u>	<u>Method</u>
TCLP silver	.014	mg/l	EPA method 6010
TCLP Arsenic	nd	mg/l	EPA method 6010
TCLP Barium	.31	mg/l	EPA method 6010
TCLP Cadmium	nd	mg/l	EPA method 6010
TCLP Chromium	nd	mg/l	EPA method 6010
TCLP Mercury	nd	mg/l	EPA method 7470
TCLP Lead	nd	mg/l	EPA method 6010
TCLP Selenium	nd	mg/l	EPA method 6010

Nd = not detected