

TIGG ZEUS
MATERIAL SAFETY DATA SHEET

SECTION I. IDENTIFICATION

SUPPLIERS NAME: TIGG CORPORATION
 EMERGENCY TELEPHONE: (724) 703-3020
 ADDRESS: 1 WILLOW AVENUE; OAKDALE, PA 15071
 CHEMICAL NAME AND SYNONYMS: ACTIVATED CARBON
 FORMULA: C

SECTION II. INGREDIENTS/SUMMARY OF HAZARDS

ACTIVATED CARBON	CAS #:	7440-44-0
	% BY WEIGHT:	100%
	ORAL LD ₅₀ :	>10g/Kg (RAT)
	TLV:	ACGIH: N/A OSHA: N/A OTHER: N/A

WARNING STATEMENTS:

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.

SEE SECTION VI FOR COMPLETE HEALTH HAZARD DATA

NATIONAL FIRE PROTECTION ASSOCIATION RATING HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

KEY		NFPA	HMIS
= NFPA/HMIS			
4 = EXTREME/SEVERE	HEALTH	0	N/A
3 = HIGH/SERIOUS			
2 = MODERATE	FIRE	1	
1 = SLIGHT			
0 = MINIMUM	REACTIVITY	0	

SARA TITLE III HAZARD CLASSIFICATION

IMMEDIATE (ACUTE) HEALTH	N/A
DELAYED (CHRONIC) HEALTH	N/A
FIRE	N/A
SUDDEN RELEASE OF PRESSURE	N/A
REACTIVE	N/A

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SECTION III. PHYSICAL DATA

BOILING POINT (°F)	N/A
VAPOR PRESSURE (mmHg)	N/A
VAPOR DENSITY (AIR =1)	N/A
SOLUBILITY IN WATER:	INSOLUBLE
SPECIFIC GRAVITY (H ₂ O = 1)	1.8-2.3
PERCENT VOLATILE BY VOLUME (%)	0
pH (AQUEOUS SOLUTIONS):	5.0-8.0
BULK DENSITY:	0.4-0.7 g/cc
APPEARANCE AND ODOR:	BLACK PARTICULATE SOLID

FOR ADDITIONAL TECHNICAL INFORMATION, CALL (724) 703-3020

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (°C):	400°C ASTM (DRY VIRGIN STATE)
FLAMMABLE LIMITS IN AIR:	N/A
AUTOIGNITION TEMPERATURE (°C):	
EXTINGUISHING MEDIA:	FLOOD WITH WATER. IF WATER IS UNAVAILABLE , NITROGEN OR FOAM MAY BE USED TO BLANKET THE ADSORBENT BED. IF THE MATERIAL IS IN A CLOSED VESSEL, A BOTTOM INLET MAY BE BLOCKED TO DEPRIVE THE FIRE OF OXYGEN, BUT THE VESSEL SHOULD REMAIN VENTED FOR RELEASING STEAM OR OTHER HOT GASES.
SPECIAL FIRE FIGHTING PROCEDURES:	WEAR PROTECTIVE CLOTHING, SELF CONTAINED BREATHING APPARATUS IF NECESSARY.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	CONTACT WITH STRONG OXIDIZERS SUCH AS OZONE, LIQUID OXYGEN, CHLORINE, PERMANGANATE, ETC., MAY RESULT IN FIRE. FLOODING THE VESSEL WITH WATER WILL EXTINGUISH ANY HOT ZONES. COPIOUS VOLUMES OF STEAM MAY BE GENERATED IN THE PROCESS OF EXTINGUISHING THE HOT ZONES. STEAM GENERATION IS REDUCED WHEN FLOODING OCCURS FROM THE BOTTOM UP, AS OPPOSED TO A SPAY FROM ABOVE. THE CARBON ITSELF MAY NOT EXHIBIT FLAMING ALTHOUGH ANY COMBUSTIBLE MATERIAL IN CONTACT WITH IT WILL. AT TEMPERATURES AROUND 900°C, CARBON CAN REACT WITH FIRE-FIGHTING MATERIALS SUCH AS WATER OR CARBON DIOXIDE TO FORM HYDROGEN AND/OR CARBON MONOXIDE WHICH COULD REACH LEVELS HAZARDOUS TO RESPIRATION OR REPRESENTING A COMBUSTIBLE OFF-GAS.

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SECTION V. REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: NONE

MATERIALS TO AVOID: CONCENTRATION OF DECOMPOSABLE ORGANICS SUCH AS KETONES, ALDEHYDES, AND OXIDANTS SUCH AS OZONE, CHLORINE, M OXYGEN LEVELS RICHER THAN AIR.

HAZARDOUS DECOMPOSITION PRODUCTS: CO FUMES MAY BE GENERATED ON COMBUSTION.

HAZARDOUS POLYMERIZATION: NO

SECTION VI. HEALTH HAZARD DATA/FIRST AID PROCEDURES

GENERAL INFORMATION:

EXPOSURE LIMITS: ACGIH TLV*: 5 mg/M³
OSHA PEL*: 10 mg/M³
* PELs and TLVs are 8-hour TWAs unless otherwise noted.

TOXICOLOGY DATA: ORAL LD50 (RATS): >10g/Kg
DERMAL LD50 (RABBITS): 0
INHALATION LC50 (RATS): >64.4 MG/L (NOMINAL CONCENTRATION)
SKIN EFFECTS (RABBITS): 0
EYE EFFECTS (RABBITS):

CANCINOGENICITY: NTP: N/A IARC: N/A OSHA REGULATED: NO

EFFECTS OF SINGLE EXPOSURE: SWALLOWING: THE PRODUCT IS NON-TOXIC THROUGH INGESTION.
SKIN ABSORPTION:
INHALATION: THE PRODUCT IS PRACTICALLY NON-TOXIC THROUGH INHALATION.
SKIN CONTACT: THE PRODUCT IS NOT A PRIMARY SKIN IRRITANT.
EYE CONTACT: THE PHYSICAL NATURE OF THE PRODUCT MAY PRODUCE EYE IRRITATION. POSSIBLE WITH EXPOSURE TO COPIOUS DUST.

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

OTHER EFFECTS OF EXPOSURE:

EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

EMERGENCY FIRST AID PROCEDURE: SWALLOWING: RINSE MOUTH WITH H₂O, GIVE COPIOUS AMOUNTS OF WATER TO CAUSE DILUTION IN STOMACH, DO NOT INDUCE VOMITING.
SKIN: FLUSH WITH WATER.
INHALATION: REMOVE FROM EXPOSURE, IF BREATHING DIFFICULTY OR DISCOMFORT PERSISTS, OBTAIN MEDICAL ATTENTION
EYES: FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET PROMPT MEDICAL ASSISTANCE IF IRRITATION PERSISTS.

NOTES TO PHYSICIAN:

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SECTION VII. PRECAUTIONS FOR SAFE HANDLING OR USE

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.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:	SWEEP UP UNUSED CARBON AND DISCARD IN REFUSE CONTAINER, OR REPACKAGE.
WASTE DISPOSAL METHOD:	DISPOSE OF UNUSED CARBON IN REFUSE CONTAINER, DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:	WASH THOROUGHLY AFTER HANDLING. EXERCISE CAUTION IN THE STORAGE AND HANDLING OF ALL CHEMICAL SUBSTANCES.

SECTION VIII. SPECIAL PROTECTION INFORMATION

PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:

RESPIRATORY PROTECTION:	A NIOSH APPROVED PARTICULATE FILTER RESPIRATOR IS RECOMMENDED IF EXCESSIVE DUST IS GENERATED.
VENTILATION:	LOCAL: RECOMMENDED MECHANICAL: RECOMMENDED
PROTECTIVE CLOTHING:	RUBBER OR NEOPRENE GLOVES RECOMMENDED
EYE PROTECTION:	SAFETY GLASSES OR GOGGLES RECOMMENDED

SECTION IX. REGULATORY STATUS

TSCA INVENTORY:	THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY LIST.
OSHA:	NONHAZARDOUS ACCORDING TO DEFINITIONS OF HEALTH HAZARD AND PHYSICAL HAZARD PROVIDED IN THE HAZARDOUS COMMUNUCATION STANDARD (29 CFR 1910.1200)
TRANSPORTATION STATUS:	
SARA TITLE III	N/A
REPORTABLE QUANTITY (RQ), UNDER U.S. EPA CERCLA:	
FEDERAL RCRA HAZARDOUS WASTE:	
STATES RIGHT-TO-KNOW LAWS:	

SECTION X. REFERENCES

NONE

SECTION XI. DATE

Prepared 12/29/08

While this information and recommendations set forth herein are believed to be accurate as to the date hereof, TIGG Corporation makes no warranty with respect hereto and disclaims all liability from reliance thereon.