

**TIGG KSS**  
**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: CARBON IMPREGNATED WITH POTASSIUM HYDROXIDE  
 FORMULA: C, KOH

**SECTION II. INGREDIENTS/SUMMARY OF HAZARDS**

Activated Carbon	CAS #:	7440-44-0
	% BY WEIGHT:	78-73%
	ORAL LD <sub>50</sub> :	>10g/Kg (RAT)
	TLV:	ACGIH: N/A OSHA: N/A OTHER: N/A

Potassium Hydroxide	CAS #:	1310-58-3
	% BY WEIGHT:	7-12%
	ORAL LD <sub>50</sub> :	N/A
	TLV:	ACGIH: N/A OSHA: N/A OTHER: N/A

**WARNING STATEMENTS:**

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	
3 = HIGH/SERIOUS	FIRE	
2 = MODERATE	REACTIVITY	
1 = SLIGHT		
0 = MINIMUM		

SARA TITLE III HAZARD CLASSIFICATION

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

**SECTION III. PHYSICAL DATA**

BOILING POINT (°F)	N/A
VAPOR PRESSURE (mmHg)	N/A
VAPOR DENSITY (AIR =1)	N/A
SOLUBILITY IN WATER:	10%
SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	2.1 (Active Carbon); 2.04 (Potassium Hydroxide Component)
PERCENT VOLATILE BY VOLUME (%)	9.75% AS WATER VAPOR
pH (AQUEOUS SOLUTIONS):	10
BULK DENSITY:	0.6-0.7 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):	N/A
FLAMMABLE LIMITS IN AIR:	LEL: N/A UEL: N/A
AUTOIGNITION TEMPERATURE (°C):	80
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:	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.

**SECTION V. REACTIVITY DATA**

STABILITY: STABLE

CONDITIONS TO AVOID: DO NOT STORE IN ADSORBER OR OTHER CONTAINER VENTED TO PERMIT A "CHIMNEY EFFECT" WITH POSSIBLE REACTION BETWEEN THIS PRODUCT AND AIRBORNE GASES OR VAPORS.

MATERIALS TO AVOID: CONCENTRATION OF DECOMPOSABLE ORGANICS SUCH AS KETONES, ALDEHYDES, AND OXIDANTS SUCH AS OZONE, CHLORINE, 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: N/A  
OSHA PEL: N/A

TOXICOLOGY DATA: ORAL LD50 (RATS): >10g/Kg  
DERMAL LD50 (RABBITS): 0  
INHALATION LC50 (RATS): >194 MG/L  
SKIN EFFECTS (RABBITS):  
EYE EFFECTS (RABBITS):

CONCINOGENICITY:

EFFECTS OF SINGLE EXPOSURE: SWALLOWING:  
SKIN ABSORPTION:  
INHALATION:  
SKIN CONTACT:  
EYE CONTACT:

EFFECTS OF REPEATED EXPOSURE:

OTHER EFFECTS OF EXPOSURE:

EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

EMERGENCY FIRST AID PROCEDURE: SWALLOWING: RINSE MOUTH WITH H<sub>2</sub>O, 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:

NOTES TO PHYSICIAN:

## 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 I 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:

TRANSPORTATION STATUS:

SARA TITLE III

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE LIST:  
SECTION 313 TOXIC CHEMICALS:

REPORTABLE QUANTITY (RQ),  
UNDER U.S. EPA CERCLA:

N/A

FEDERAL RCRA HAZARDOUS  
WASTE:

STATES RIGHT-TO-KNOW LAWS:

## SECTION X. REFERENCES

NONE

## SECTION XI. DATE

Prepared 6/16/06  
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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.