

TIGG ARM
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 alumina
FORMULA: Al₂O₃, Fe₂O₃, Fe(OH)₂, Na₂O, Na₂SO₄

SECTION II. INGREDIENTS/SUMMARY OF HAZARDS

| | | |
|------------------|------------------------------|---------------------------|
| Aluminum Oxide | CAS #: | 1344-28-1 |
| | % BY WEIGHT: | 80-100 |
| | ORAL LD₅₀: | unknown |
| | TLV: | ACGIH: OSHA: OTHER: |
| Ferric Oxide | CAS #: | 1309-37-1 |
| | % BY WEIGHT: | 3-7 |
| | ORAL LD₅₀: | unknown |
| | TLV: | ACGIH: OSHA: OTHER: |
| Ferric Hydroxide | CAS #: | 1309-33-7 |
| | % BY WEIGHT: | 3-7 |
| | ORAL LD₅₀: | unknown |
| | TLV: | ACGIH: OSHA: OTHER: |
| Sodium Oxide | CAS #: | 12401-86-4 |
| | % BY WEIGHT: | 1-5 |
| | ORAL LD₅₀: | unknown |
| | TLV: | ACGIH: OSHA: OTHER: |
| Sodium Sulfate | CAS #: | 7757-82-6 |

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| | | |
|--|------------------------------|---------------------------|
| | % BY WEIGHT: | 1-5 |
| | ORAL LD₅₀: | unknown |
| | TLV: | ACGIH: OSHA: OTHER: |

WARNING STATEMENTS:

If heated to decomposition, may emit toxic gases of sulfur oxides

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 | Not available | |
| 3 = HIGH/SERIOUS | | | |
| 2 = MODERATE | FIRE | 0 | |
| 1 = SLIGHT | | | |
| 0 = MINIMUM | REACTIVITY | Not available | |

SARA TITLE III HAZARD CLASSIFICATION – Product does not contain any chemicals in concentrations subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372

SECTION III. PHYSICAL DATA

| | |
|--|--------------------------|
| BOILING POINT (°F) | Not applicable |
| VAPOR PRESSURE (mmHg) | Not applicable |
| VAPOR DENSITY (AIR =1) | Not applicable |
| SOLUBILITY IN WATER: | Slightly soluble |
| SPECIFIC GRAVITY (H₂O = 1) | 1.06 |
| PERCENT VOLATILE BY VOLUME (%) | Not applicable |
| pH (AQUEOUS SOLUTIONS): | Not applicable |
| BULK DENSITY: | 66 lbs. per cubic foot |
| APPEARANCE AND ODOR: | Brown granules, odorless |

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

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

| | |
|--|-----------------|
| FLASH POINT (°C): | Not applicable |
| FLAMMABLE LIMITS IN AIR: | Not applicable |
| AUTOIGNITION TEMPERATURE (°C): | Not applicable |
| EXTINGUISHING MEDIA: | Non combustible |
| SPECIAL FIRE FIGHTING PROCEDURES: | Not applicable |

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UNUSUAL FIRE AND EXPLOSION HAZARDS: Not applicable

SECTION V. REACTIVITY DATA

STABILITY: yes
CONDITIONS TO AVOID: Keep away from acids and bases
HAZARDOUS DECOMPOSITION PRODUCTS: If heated to decomposition, may emit toxic gases of sulfur oxides

SECTION VI. HEALTH HAZARD DATA/FIRST AID PROCEDURES

GENERAL INFORMATION:

EXPOSURE LIMITS: ACGIH TLV: Aluminum oxide (total dust) – TWA – 10 mg/m³; STEL – none (respirable dust) – TWA – none; STEL - none
Ferric Oxide (fume, dust) – TWA – 5 mg/m³; STEL - none
OSHA PEL: Aluminum oxide (total dust) – TWA – 15 mg/m³; Ceiling – none (respirable dust) – TWA – 5 mg/m³; Ceiling - none
Ferric Oxide (fume, dust) – TWA – 10 mg/m³; Ceiling - none

CARCINOGENICITY: None of the ingredients present at concentrations equal to or greater than 0.1% are listed as a carcinogen or potential carcinogen by IARC, NTP, or OSHA

EFFECTS OF SINGLE EXPOSURE: SWALLOWING: not applicable
INHALATION: may cause irritation of the upper respiratory tract
SKIN CONTACT: may cause irritation
EYE CONTACT: may cause irritation

EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Not applicable

EMERGENCY FIRST AID PROCEDURE: SWALLOWING: not applicable
SKIN: wash skin thoroughly with soap and water
INHALATION: if overcome by high dust concentrations, remove to a ventilated area
EYES: flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician. Do not scrub, since the abrasion may cause irritation

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SECTION VII. PRECAUTIONS FOR SAFE HANDLING OR USE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Collect solids, recycle if possible

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Dispose of waste in accordance with federal, state or local regulations

SECTION VIII. SPECIAL PROTECTION INFORMATION

PERSONAL PROTECTION: Provide general and local ventilation to maintain concentrations of air contaminants below recommended standards. Wear eye and respiratory protection (goggles and mask), or a full-face respirator if necessary

SECTION IX. REGULATORY STATUS

TRANSPORTATION STATUS: Not regulated (CFR 49)

SARA TITLE III Product does not contain any chemicals in concentrations subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372

SECTION X. REFERENCES

NONE

SECTION XI. DATE

Prepared 11/20/07
Revised 4/21/08

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.

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