MATERIAL SAFETY DATA SHEET (MSDS)

Section 1. Chemical product & company identification

PRODUCT NAME: WHITE ALUMINIUM OXIDE
PRODUCT NAME/SYNONYMS: DURALUM SPECIAL WHITE - AB, BP, RF, SK
MOLECULAR FORMULA Al₂O₃
HMIS
  HEALTH 1
  FLAMMABILITY 0
  PHYSICAL HAZARD 0
  Personal Protection E

PREPARATION/REVISION DATE: 2.2010

Section 2. Composition/information on ingredients

CHEMICAL NAME: Aluminum Oxide (non-fibrous)
CAS NO. 1344-28-1
EINECS 215-691-6
% BY WEIGHT 99.5 – 99.76
OSHA PEL Total (TWA) 15 mg/m³
  Respirable (TWA) 5 mg/m³
CHEMICAL NAME: IMPURITIES
  SiO₂ + Fe₃O₃ + Na₂O + CaO + MgO + TiO₂
% BY WEIGHT < 1.0

Section 3. Hazard Identification/Potential Health Effects

Emergency Overview: Dust irritating to eyes and respiratory tract

EYE
  Mechanical eye irritant. May cause tearing and redness.

SKIN
  Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.

SENSITIZATION
  No data available

INGESTION
  May cause nausea and vomiting. No long-term health effects are anticipated.

INHALATION
  Dust may be slightly irritating to respiratory tract. May cause coughing or shortness of breath.

TARGET ORGANS
  Eyes, skin, respiratory system

ACUTE EFFECTS of EXPOSURE
  Exposure may include persistent cough, shortness of breath.

CHRONIC EFFECTS of EXPOSURE
  N/A

SIGNS & SYMPTOMS of EXPOSURE
  Coughing, shortness of breath

Section 4. First Aid Measures

EYES
  Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.

SKIN
  Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.

INHALATION
  Remove person to fresh air. If signs/symptoms develop,
seek medical attention.

INGESTION
Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

Section 5. Fire Fighting Measures

COMBUSTIBLE PROPERTIES None
EXTINGUISHING MEDIA Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.
SPECIAL FIRE FIGHTING PROCEDURES In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.
FIRE & EXPLOSION HAZARDS Not applicable. None inherent in this product.

Section 6. Accidental Release Measures

PERSONAL SAFETY PRECAUTIONS Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.
ENVIRONMENTAL PRECAUTIONS Ensure material is properly disposed of.
CLEANUP MEASURES Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

Section 7. Handling & Storage

HANDLING Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.
STORAGE Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

Section 8. Handling & Storage

ENGINEERING CONTROLS Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.
HYGIENIC MEASURES Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.
RESPIRATORY PROTECTION Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.
EYE PROTECTION Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.
SKIN PROTECTION Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.
Section 9. Physical & Chemical Properties

FORMULA  Al2O3
PHYSICAL STATE  Solid-granular
BOILING POINT  N/A
MELTING POINT  2100°C
pH at 20°C  N/A
APPEARANCE  White
ODOR  Odorless
FLASH POINT  N/A
DECOMPOSITION TEMPERATURE  N/A
VAPOR PRESSURE  N/A
VAPOR DENSITY  N/A
EXPLOSIVE PROPERTIES  None
SOLUBILITY  Insoluble
OXIDIZING PROPERTIES  N/A
SPECIFIC GRAVITY  3.6
BULK DENSITY  N/A

Section 10. Stability & Reactivity

THERMAL DECOMPOSITION  N/A
INCOMPATIBILITY  N/A
CONDITIONS TO AVOID  None known
HAZARDOUS DECOMPOSITION PRODUCTS  None expected
DANGEROUS REACTIONS  None known
HAZARDOUS POLYMERIZATION  Will not occur

Section 11. Toxicological Information

CAS # 1344-28-1

COMPONENT ANALYSIS LD50/LC50
CARCINOGENICITY
EPIDEMIOLOGY
TERATOGENICITY  Data Not Available
NEUROTOXICITY
MUTAGENICITY
REPRODUCTIVE EFFECTS

Section 12. Ecological Information

ECOTOXICITY  Not Available

Section 13. Disposal Considerations

Solid or chemical waste generators must determine whether a discarded waste is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local waste regulations to ensure complete and accurate classification.
Section 14. Transportation Information

DOT This product is not regulated by USDOT as a Hazardous Material (49 CFR 172.101). No UN code assigned. No placard required for transportation.

IMDG Not regulated as a Hazardous Material.

Acao/IATA Not regulated as a Hazardous Material.

EU (ADR, RID) Not regulated as a Hazardous Material.

Section 15. Regulatory Information

TSCA Aluminum Oxide is listed on the TSCA inventory under CAS# 1344-28-1

RCRA Aluminum Oxide is not classified as a hazardous material under RCRA or its regulations, 40 CFR 261.

CERCLA Aluminum Oxide is not classified as a hazardous substance under CERCLA regulations, 40 CFR 302.

SARA Aluminum Oxide is not an extremely hazardous substance in Section 302 and is not a toxic chemical subject to the requirements of 313.

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