

M A T E R I A L   S A F E T Y   D A T A   S H E E T

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DATE: DECEMBER 21, 1998

PRODUCT CODE: KF0110200  
2232001

TRADE NAME: ACTIVATED BLACK MAGIC PLUS  
CHEMICAL NAME: SODIUM HYDROXIDE  
CHEMICAL FAMILY: INORGANIC ALKALI  
PROPRIETARY FORMULATION

NFPA DESIGNATION 704

HAZARD-RATING:

- 4 - EXTREME
- 3 - HIGH
- 2 - MODERATE
- 1 - SLIGHT

FIRE: 0

HEALTH: 3      2      REACTIVITY

0      SPECIFIC

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

**SODIUM HYDROXIDE** (APPROX) 70-80 %, CAS 1310-73-2, TLV=2 MG/M3, REGULATED UNDER CWA/311, NIOSH CRITERIA DOCUMENTS, CERCLA, OSHA AIR CONTAMINANTS, ACGIH TLV CHEMICALS, DOT HAZARDOUS MATERIALS, CANADIAN IDL 1% CONC., MA SUBSTANCE LIST, NJ RIGHT-TO-KNOW HAZ SUBSTANCE LIST S, PA HAZARDOUS SUBSTANCE LIST E.

**SODIUM NITRATE** (LESS THAN) 15 %, CAS 7631-99-4, REGULATED UNDER DOT HAZARDOUS MATERIALS, CANADIAN IDL 1% CONC., MA SUBSTANCE LIST, NJ RIGHT-TO-KNOW HAZ SUBSTANCE LIST, PA HAZARDOUS SUBSTANCE LIST.

\***SODIUM NITRITE**, (APPROX) 10% CAS #7632-00-0 CWA/311, CERCLA, SARA TITLE III SECTION 313, NTP TESTING PROGRAM, DOT HAZARDOUS MATERIALS, DOT HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES, CANADIAN IDL 1% CONC., MA SUBSTANCE LIST, NJ RIGHT-TO-KNOW HAZARDOUS SUBSTANCE LIST, PA ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST, EPA:CERCLA RQ IS 100 LB, EPCRA SECTION 313 DE MINIMIS CONCENTRATION IS 1.0%.

\* **ETHYLENE THIOUREA** (LESS THAN) 0.3%, CAS 96-45-7, TLV=545 MG/KG, REGULATED UNDER SDWA/PRIORITY LIST, NIOSH SPECIAL HAZARD REVIEWS, NIOSH CURRENT INTELLIGENCE BULLETINS, RCRA, RCRA SECOND THIRD WASTES, CERCLA, SARA TITLE III SECTION 313, NTP ANNUAL REPORT ON CARCINOGENS, IARC GROUP 1,2A,2B CARCINOGENS, EPA CARCINOGEN ASSESSMENT GROUP, NTP TESTING PROGRAM, DOT HAZARDOUS MATERIALS, CA PROP 65-CARCINOGENS, CANADIAN IDL 0.1% CONC., MA SUBSTANCE LISTS C E, NJ RIGHT-TO-KNOW HAZ SUBSTANCE LIST S, PA HAZARDOUS SUBSTANCE LISTS E S. THIS SUBSTANCE IS LISTED AS A HAZARDOUS AIR POLLUTANT

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ACTIVATED BLACK MAGIC PLUS

CONTINUED

(HAP) UNDER TITLE III OF THE CLEAN AIR ACT AMENDMENTS OF 1990.

\* THIS SUBSTANCE IS A CHEMICAL SUBJECT TO SARA TITLE III, SECTION 313 REPORTING REQUIREMENTS.

NO OTHER INGREDIENTS IN THIS MIXTURE ARE CONSIDERED TO BE HAZARDOUS ACCORDING TO ANY STATE OR FEDERAL REGULATIONS.

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: NA  
MELTING POINT: APPROX. 900 DEG. F  
SPECIFIC GRAVITY: NA  
VAPOR PRESSURE: NA  
PERCENTAGE OF VOLATILITY BY VOLUME: NA  
VAPOR DENSITY (AIR =1): NA  
EVAPORATION RATE (BUTYL ACETATE = 1): NA  
SOLUBILITY IN WATER: VERY SOLUBLE  
APPEARANCE AND ODOR: WHITE GRANULAR MIXTURE  
pH 10% BY WEIGHT AQUEOUS SOLUTION: 12+

### SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (F): NOT COMBUSTIBLE  
AUTOIGNITION TEMPERATURE: NON FLAMMABLE  
FLAMMABLE LIMITS IN AIR % BY VOLUME: UPPER: NA LOWER: NA  
EXTINGUISHING MEDIA: THIS PRODUCT IS NOT COMBUSTIBLE. WATER SPRAY, FOAM, CARBON DIOXIDE, OR DRY CHEMICAL MAY BE USED IN AREAS WHERE THIS PRODUCT IS STORED.  
SPECIAL FIRE FIGHTING MEDIA: WEAR FULL PROTECTIVE CLOTHING. AVOID DIRECT CONTACT OF THIS PRODUCT WITH WATER AS THIS CAN CAUSE VIOLENT EXOTHERMIC REACTION.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: SEE SECTION V - REACTIVITY

### SECTION V - REACTIVITY DATA

INSTABILITY: UNDER NORMAL CONDITIONS OF USE, THIS MATERIAL IS STABLE.  
INCOMPATIBILITY: AVOID CONTACT WITH WATER. THIS PRODUCT MAY BE ADDED SLOWLY TO WATER OR ACIDS WITH DILUTION AND CONSTANT STIRRING TO AVOID A VIOLENT EXOTHERMIC REACTION. WHEN HANDLING THIS PRODUCT, AVOID CONTACT WITH ALUMINUM, TIN, ZINC, AND ALLOYS CONTAINING THESE METALS. DO NOT MIX WITH STRONG ACIDS WITHOUT DILUTION AND AGITATION TO PREVENT VIOLENT OR EXPLOSIVE REACTION. AVOID CONTACT WITH LEATHER, WOOL, ACIDS, ORGANIC HALOGEN COMPOUNDS, AND ORGANIC NITRO COMPOUNDS.  
DECOMPOSITION: AQUEOUS SOLUTIONS MAY LIBERATE HYDROGEN UPON REACTION WITH METALS LISTED ABOVE. CONTACT WITH ORGANIC HALOGEN COMPOUNDS WILL LIBERATE CHLORINE.  
POLYMERIZATION: NOT KNOWN TO POLYMERIZE.

CONDITIONS TO AVOID: CONTACT WITH INCOMPATIBLE MATERIALS LISTED ABOVE.

#### SECTION VI - HEALTH HAZARD DATA

**THRESHOLD LIMIT VALUE (TLV):** UNKNOWN FOR MIXTURE-SEE SECTION 2

**EFFECTS OF OVEREXPOSURE:**

**ACUTE:** CORROSIVE TO ALL BODY TISSUES WHICH IT COMES IN CONTACT. THE EFFECT OF LOCAL DERMAL EXPOSURE MAY CONSIST OF MULTIPLE AREAS OF SUPERFICIAL DESTRUCTION OF THE SKIN OR OF PRIMARY IRRITANT DERMATITIS. SIMILARLY, INHALATION OF DUST, SPRAY, OR MIST MAY RESULT IN VARYING DEGREES OF IRRITATION OR DAMAGE TO THE RESPIRATORY TRACT TISSUES AND AN INCREASED SUSCEPTIBILITY TO RESPIRATORY ILLNESS.

**CHRONIC:** NO KNOWN CHRONIC EFFECTS.

**HUMAN DERMAL EXPOSURE:** REGARDLESS OF CONCENTRATION, THE SEVERITY OF DAMAGE AND EXTENT OF ITS IRREVERSIBILITY INCREASES WITH LENGTH OF CONTACT TIME. PROLONGED CONTACT WITH EVEN DILUTE SODIUM HYDROXIDE SOLUTION CAN CAUSE A HIGH DEGREE OF TISSUE DESTRUCTION. THE LATENT PERIOD, FOLLOWING SKIN CONTACT DURING WHICH NO SENSATION OF IRRITATION OCCURS, VARIES FROM SEVERAL HOURS FOR 0.4-4% SOLUTIONS TO 3 MINUTES WITH 25-50% SOLUTIONS.

**EMERGENCY AND FIRST AID PROCEDURES:**

**EYES:** OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION. IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES, HOLDING LIDS APART TO ENSURE FLUSHING OF THE ENTIRE SURFACE. WASHING EYES WITHIN SEVERAL SECONDS IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. SEEK MEDICAL ATTENTION IMMEDIATELY.

**SKIN:** IMMEDIATELY WASH CONTAMINATED AREAS WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND FOOTWEAR AND WASH CLOTHING BEFORE REUSE. DISCARD FOOTWEAR WHICH CANNOT BE DECONTAMINATED. SEEK MEDICAL ATTENTION IMMEDIATELY.

**INHALATION:** REMOVE TO FRESH AIR; IF BREATHING IS DIFFICULT, HAVE TRAINED PERSON ADMINISTER OXYGEN. IF RESPIRATION STOPS, GIVE MOUTH-TO-MOUTH RESUSCITATION. GET MEDICAL ATTENTION.

**INGESTION:** NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. IF AVAILABLE, GIVE SEVERAL GLASSES OF MILK. IF VOMITING OCCURS SPONTANEOUSLY, KEEP AIRWAY CLEAR. SEEK MEDICAL ATTENTION IMMEDIATELY.

**ROUTES OF EXPOSURE:**

**INHALATION:** AIRBORNE CONCENTRATIONS OF DUST, MIST OR SPRAY OF THIS PRODUCT MAY CAUSE DAMAGE TO THE UPPER RESPIRATORY TRACT AND THE LUNG TISSUE WHICH COULD PRODUCE CHEMICAL PNEUMONIA DEPENDING UPON SEVERITY OF EXPOSURE.

**SKIN:** THIS PRODUCT IS DESTRUCTIVE TO TISSUES CONTACTED AND PRODUCES SEVERE BURNS. A LATENT PERIOD MAY EXIST BETWEEN EXPOSURE AND SENSE OF IRRITATION.

**EYE CONTACT:** THIS PRODUCT IS DESTRUCTIVE TO EYE TISSUES ON CONTACT. WILL CAUSE SEVERE BURNS THAT RESULT IN DAMAGE TO THE EYES AND EVEN BLINDNESS.

**INGESTION:** THIS PRODUCT, IF SWALLOWED, CAN CAUSE SEVERE BURNS AND COMPLETE TISSUE PERFORATION OF MUCOUS MEMBRANES OF THE MOUTH, THROAT, ESOPHAGUS, AND STOMACH.

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

**SPILL, LEAK OR RELEASE:** IF TRAINED IN ACCORDANCE TO 29 CFR 1910.120, LEAKS SHOULD BE STOPPED. SPILLS SHOULD BE CONTAINED AND CLEANED UP IMMEDIATELY. LIQUID SPILLS SHOULD BE REMOVED BY USING A VACUUM TRUCK. SOLID SPILLS SHOULD BE SCOOPED UP AND PLACED IN APPROVED CONTAINERS FOR DISPOSAL. NEUTRALIZE REMAINING TRACES OF MATERIAL WITH ANY DILUTE MINERAL ACID. THE SPILL AREA SHOULD THEN BE FLUSHED WITH WATER FOLLOWED BY LIBERAL COVERING OF SODIUM BICARBONATE. ALL CLEAN-UP MATERIAL SHOULD BE REMOVED AND PLACED IN APPROVED CONTAINERS, LABELED AND STORED IN A SAFE PLACE TO AWAIT PROPER TREATMENT OR DISPOSAL. SPILLS ON AREAS OTHER THAN PAVEMENT, E.G., DIRT OR SAND, MAY BE HANDLED BY REMOVING THE AFFECTED SOILS AND PLACING IN APPROVED CONTAINERS. PERSONS PERFORMING CLEAN-UP WORK SHOULD WEAR ADEQUATE PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING. SPILLS OR RELEASES SHOULD BE REPORTED, IF REQUIRED, TO THE APPROPRIATE LOCAL, STATE AND FEDERAL REGULATORY AGENCIES.

**WASTE DISPOSAL:** DISCHARGE TO A DISPOSAL SYSTEM. IN ORDER TO BE COMPLETELY INFORMED ON THE LATEST REGULATIONS FOR YOUR AREA, PLEASE CONTACT THE LOCAL AUTHORITIES.

**HANDLING AND STORAGE:** DO NOT GET INTO EYES, ON SKIN, OR CLOTHING. AVOID BREATHING DUST, MIST, OR SPRAY. DO NOT TAKE INTERNALLY. USE WITH ADEQUATE VENTILATION AND EMPLOY RESPIRATORY PROTECTION WHEN EXPOSURE TO DUST, MIST OR SPRAY IS POSSIBLE. WHEN HANDLING, WEAR CHEMICAL SPLASH GOGGLES, FACE SHIELD, RUBBER GLOVES AND PROTECTIVE CLOTHING. WASH THOROUGHLY AFTER HANDLING OR CONTACT - EXPOSURE CAN CAUSE BURNS WHICH ARE NOT IMMEDIATELY PAINFUL OR VISIBLE. KEEP CONTAINER CLOSED. PRODUCT CAN REACT VIOLENTLY WITH WATER, ACIDS, AND OTHER SUBSTANCES - READ SPECIAL MIXING AND HANDLING INSTRUCTIONS BELOW CAREFULLY BEFORE USING. PRODUCT IS CORROSIVE TO TIN, ALUMINUM, ZINC AND ALLOYS CONTAINING THESE METALS, AND WILL REACT VIOLENTLY WITH THESE METALS IN POWDER FORM.

**SPECIAL MIXING AND HANDLING INSTRUCTIONS:** PRODUCT CAN REACT VIOLENTLY WITH WATER. CONSIDERABLE HEAT IS GENERATED WHEN PRODUCT IS MIXED WITH WATER. THEREFORE, WHEN MAKING SOLUTIONS ALWAYS CAREFULLY FOLLOW THESE STEPS:

- ALWAYS WEAR ALL PROTECTIVE CLOTHING. NEVER ADD WATER TO PRODUCT. ALWAYS ADD PRODUCT - WITH CONSTANT STIRRING - SLOWLY TO SURFACE OF LUKEWARM (80-100 F.) WATER, TO ASSURE PRODUCT IS BEING COMPLETELY DISSOLVED AS IT IS ADDED.

- IF PRODUCT IS ADDED TOO RAPIDLY - OR WITHOUT STIRRING, AND BECOMES CONCENTRATED AT BOTTOM OF MIXING VESSEL, EXCESSIVE HEAT MAY BE GENERATED RESULTING IN DANGEROUS BOILING AND SPATTERING AND A POSSIBLE IMMEDIATE AND VIOLENT ERUPTION OF HIGHLY CAUSTIC SOLUTION.

PRODUCT CAN REACT EXPLOSIVELY WITH ACIDS, ALDEHYDES, AND MANY OTHER ORGANIC CHEMICALS - WHEN MIXING PRODUCT WITH SOLUTIONS CONTAINING SUCH CHEMICALS, FOLLOW ALL OF ABOVE MIXING INSTRUCTION, AND ADD PRODUCT VERY GRADUALLY, WHILE STIRRING CONSTANTLY.

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ALWAYS EMPTY AND CLEAN CONTAINERS OF ALL RESIDUES BEFORE ADDING PRODUCT TO AVOID POSSIBLE EXPLOSIVE REACTION BETWEEN PRODUCT AND UNKNOWN RESIDUE.

**SECTION VIII - CONTROL MEASURES**

**RESPIRATORY PROTECTION:** RESPIRATORY PROTECTION IS NOT REQUIRED UNDER NORMAL USE. USE NIOSH/MSHA APPROVED RESPIRATOR WHERE DUST, MIST, OR SPRAY MAY BE GENERATED.

**VENTILATION:** WORKING SOLUTION MECHANICAL 200CFM

**SPECIAL:** NA

**OTHER:** NA

**PROTECTIVE GLOVES:** CHEMICAL RESISTANT GLOVES SHOULD BE WORN AND MAY BE DECONTAMINATED BY WASHING WITH MILD SOAP AND WATER. NATURAL AND BUTYL RUBBER ARE SUGGESTED.

**EYE PROTECTION:** WEAR CHEMICAL SAFETY GLASSES PLUS FULL FACE SHIELD TO PROTECT AGAINST SPLASHING.

**OTHER PROTECTIVE EQUIPMENT:** IMPERVIOUS PROTECTIVE CLOTHING AND CHEMICALLY RESISTANT SAFETY SHOES SHOULD BE WORN TO MINIMIZE CONTACT. WASH CONTAMINATED CLOTHING WITH SOAP AND WATER AND DRY BEFORE REUSE. SHOWERS AND EYEWASH FACILITIES SHOULD BE IN CLOSE PROXIMITY.

**SECTION IX - TRANSPORTATION REQUIREMENTS**

**PROPER SHIPPING NAME:** CORROSIVE SOLIDS, BASIC INORGANIC N.O.S.

**HAZARD CLASS:** 8

**ID NUMBER:** UN3262

**PKG GROUP:** II

**DOT GUIDE NO:** 154

**OTHER:** NA

**SECTION X - SPECIAL PRECAUTIONS**

WHEN REPLENISHING WORKING SOLUTIONS ADD MATERIAL VERY SLOWLY AND CAUTIOUSLY WITH CONTINUOUS STIRRING. NEVER ADD THIS MATERIAL TO SOLUTIONS OF TEMPERATURES OF 100 F. OR HIGHER. NEVER ADD THIS MATERIAL TO ANY SOLUTION OTHER THAN COOL WATER OR COOL SOLUTIONS OF THE MATERIAL.

WHEN ADDING WATER TO WORKING SOLUTIONS TO REPLENISH EVAPORATIVE LOSS ADD VERY SLOWLY AND CAUTIOUSLY AGAINST BACK WALL OF PROCESS TANK. UNDER NO CIRCUMSTANCES ADD WATER TO WORKING BATHS OF OPERATING TEMPERATURE UNLESS THE BATH IS BOILING MODERATELY OR IS MECHANICALLY AGITATED. ANY WATER ADDED TO WORKING SOLUTIONS SHOULD BE AT TEMPERATURES OF 90 F. OR LESS.

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