KEYSTONE ANILINE CORPORATION

2501 WEST FULTON STREET

CHICAGO, ILLINOIS 60612

CORPORATE OFFICE: 312.666.2015

HEALTH & SAFETY FAX: 312.666.8530

TRADE NAME: KEYACID RED FH

PRODUCT ID: 601-601-50

PREPARED FOR: FISHER HAMILTON SCIENTIFIC

EMERGENCY PHONE: Call CHEMTEL 800.255.3924

HEALTH & SAFETY TEL: 312.666.2015

MATERIAL SAFETY DATA SHEET

N O T E: DO NOT DETACH THIS GUIDANCE COVER SHEET FROM THE REST OF THIS DOCUMENT. This page indicates the Keystone Trade Name and Product ID. This identifying information must be referenced when ordering products or making inquiries.

A) YOUR CERTIFICATION OF COMPLIANCE UNDER FEDERAL AND STATE REGULATIONS

IMPORTANT NOTE: THIS DOCUMENT IS YOUR OFFICIAL CERTIFICATION OF COMPLIANCE as stated in each applicable section. It is compiled in accordance with OSHA's Hazard Communication standard (29 CFR 1910.1200), and other federal and state regulations. NOTE: NO ADDITIONAL COMPANY CERTIFICATION OF COMPLIANCE IS REQUIRED WHEN COMPLIANCE IS INDICATED IN THE APPROPRIATE SECTION OF THIS DOCUMENT. To avoid use of outdated information, please completely destroy ALL previously dated MSDS' that are on file.

B) ABOUT THE FORMAT OF THIS MATERIAL SAFETY DATA SHEET

New and updated MSDS' are presented in the ANSI Z400.1 Sixteen-section format. All available information is included in systematic updates.

C) ABOUT THE PURPOSE AND AVAILABILITY OF THIS DOCUMENT

Under the federal OSHA Hazard Communication Standard and some State Right to Know laws, employers using this product in their operation must make this MSDS available to all employees handling this product in any manner. The MSDS must be readily available for review by all persons concerned.

This MSDS is designed to effectively communicate Health and Physical Hazards to the material handler and all other responsible persons concerned with Health and Environmental protection and regulatory compliance. Distributors receiving this MSDS are obligated to readily provide a copy to their customers, affiliates, and agents.

D) THE PRODUCT USER RESPONSIBILITY NOTICE

This type of document cannot cover all possible unique situations. It is the product user's responsibility to provide a safe workplace, and to pass on all Health, Safety and Environmental information to all employees and customers that may handle this product. Under 29 CFR 1910.1200, all product users and handlers must be informed of U.S. OSHA requirements, and the need to be familiar with them.

E) ABOUT CUSTOMER INQUIRIES

This MSDS includes all technical and Regulatory information available on the Effective Date. Please Fax technical questions directly to the appropriate laboratory. Chicago Lab Fax: 312-666-8530, or Los Angeles Lab Fax: 562-921-3461. Fax all health, safety & environmental questions to the Chicago office at 312-666-2015. Note: Product information requests will be expedited by providing: 1) The eight digit Keystone Product ID Number, 2) The complete Keystone Trade Name and 3) Detailed comments explaining the nature of our client's request or problem.

PREPARATION DATE

01-07-02

SECTION 1 CHEMICAL IDENTIFICATION

C.I. NAME

: PROPRIETARY BLEND

C.I. NUMBER : N/A CAS NUMBER : N/A

CHEMICAL FAMILY: AZO DYE PHYSICAL FORM : POWDER

SECTION 2 INGREDIENTS HAZARDOUS UNDER OSHA 29 CFR PART 1910.1200 APPENDIX A & B

COMPONENT NAME

CAS NUMBER

PET.

NONE

SECTION 3 HAZARD IDENTIFICATION AND EMERGENCY OVERVIEW

HMIS RATINGS

HEALTH

FLAMMABILITY 1

REACTIVITY

PROTECTION F, N

EMERGENCY OVERVIEW:

POSSIBLE EXPOSURES: EYES, SKIN, BREATHING DUSTS, ACCIDENTAL SWALLOWING

POSSIBLE HEALTH EFFECTS:

EYE CONTACT: BASED ON ANIMAL TOXICITY DATA (SEE SECTION 11) NOT EXPECTED TO CAUSE CHEMICAL IRRITATION, HOWEVER, SOME MINOR PHYSICAL IRRITATION CAN OCCUR ON PROLONGED CONTACT. 1

SKIN CONTACT: BASED ON ANIMAL TOXICITY DATA (SEE SECTION 11) NOT EXPECTED TO CAUSE CHEMICAL IRRITATION, HOWEVER, SOME MINOR PHYSICAL IRRITATION CAN OCCUR ON PROLONGED CONTACT. 1

BREATHING DUST: CAN CAUSE MILD IRRITATION OF NOSE AND THROAT. 1 SWALLOWING: BASED ON ANIMAL TOXICITY DATA (SEE SECTION 11) EXPECTED TO BE PRACTICALLY NON-TOXIC, HOWEVER, STOMACH AND INTESTINE UPSET CAN OCCUR IF LARGE AMOUNTS ARE SWALLOWED. 1

SENSITIZATION: NK

TARGET ORGANS: EYES, SKIN, NOSE, THROAT, STOMACH, INTESTINES 1

CANCER INFORMATION:

PRODUCT AND COMPONENTS NOT KNOWN TO US TO BE CARCINOGENS

NTP: NK IARC: NK OSHA: NR

1 PRECAUTIONS:

PROTECT YOURSELF FROM EITHER EXPECTED OR UNEXPECTED IRRITATION, OR ANY ALLERGIC REACTIONS. WORKERS SHOULD WEAR ALL PROPERLY SELECTED PROTECTIVE EQUIPMENT AND CLOTHING AS INSTRUCTED IN SECTION 8 OF THIS MSDS. WASH HANDS AND FACE AFTER HANDLING AND BEFORE EATING, DRINKING, SMOKING OR USING RESTROOM FACILITIES. AFTER EACH SHIFT, CLEAN ALL PROTECTIVE EQUIPMENT, WASH ALL WORK CLOTHES, AND SHOWER. READ SECTIONS 8 & 11, TOXICOLOGY INFORMATION.

UNUSUAL HAZARDS: IF MIXED WITH AIR IN SUFFICIENT AMOUNTS & PROPORTIONS, ORGANIC DUSTS CAN FORM FLAMMABLE OR EXPLOSIVE DUST/AIR MIXTURES. AS PRECAUTIONS, KEEP AREAS CLEAN AND AVOID DUST BUILD-UP. HAVE PLENTY OF GOOD VENTILATION. AVOID CREATING VERY DUSTY CONDITIONS. WHEN MIXING, POURING OR PROCESSING BULK AMOUNTS OF POWDERS, GROUND ALL CONTAINERS AND AVOID STATIC CHARGES, SPARKS, SMOKING, OPEN FLAMES, OR OTHER POSSIBLE CAUSES OF FIRE OR EXPLOSION.

SECTION 4 FIRST AID INSTRUCTIONS

- LEAST 20 MINUTES, HOLDING EYELIDS OPEN TO RINSE COMPLETELY. CALL A DOCTOR, AND GET MEDICAL HELP QUICKLY, AS A PRECAUTION.
- SKIN CONTACT: REMOVE AFFECTED CLOTHING. WASH AFFECTED SKIN AREA WITH PLENTY OF SOAP AND WATER. RINSE WITH PLENTY OF WATER. WASH ALL WORK CLOTHES BEFORE WEARING AGAIN. IF ANY REDNESS, SWELLING, ITCHING, OR PAIN OF THE SKIN STARTS, SEE A DOCTOR QUICKLY, AS A PRECAUTION.
- BREATHING PRODUCT DUST: MOVE PERSON TO FRESH AIR. IF PERSON IS HAVING DIFFICULTY BREATHING, GIVE OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET EMERGENCY MEDICAL HELP QUICKLY. CALL 911 IF AVAILABLE IN YOUR AREA, OR OTHER MEDICAL EMERGENCY NUMBER.
- SWALLOWING OF PRODUCT: IF SWALLOWED, CALL A DOCTOR AND GET EMERGENCY MEDICAL HELP QUICKLY.

SECTION 5 FIRE FIGHTING INSTRUCTIONS

FLASH POINT : NA

TYPES OF EXTINGUISHERS: DRY CHEMICAL, CO2, WATER SPRAY OR REGULAR FOAM FIREFIGHTING DIRECTIONS: WEAR SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST POSSIBLY TOXIC FUMES. WEAR FULL FIRE-PROTECTIVE CLOTHING. MOVE CONTAINERS FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. APPLY COOLING WATER TO SIDES OF CONTAINERS THAT ARE EXPOSED TO FLAMES UNTIL WELL AFTER FIRE IS OUT.

SECTION 6 ACCIDENTAL SPILL OR RELEASES

WEAR A NIOSH APPROVED DUST RESPIRATOR, ALONG WITH ALL PROTECTIVE CLOTHING AN EQUIPMENT AS DESCRIBED IN SECTION 8 OF THIS MSDS. READ SECTION 8.

CONTAIN AND CLEAN UP SPILL IMMEDIATELY. SWEEP POWDERS CAREFULLY, USING AN ABSORBENT (SUCH AS SWEEPING COMPOUND) TO KEEP DOWN THE DUST IN THE AREA. SCOOP MATERIAL & ABSORBENT INTO DISPOSAL DRUM, SEAL AND LABEL.

RCRA STATUS: SEE REGULATORY INFORMATION, SECTION 15.

ENVIRONMENTAL PROTECTION: PREVENT FROM ENTERING FLOOR DRAINS OR SEWERS. DO NOT RELEASE TO SEWERS, STREAMS, RIVERS NOR TO ANY OTHER BODIES OF WATER WITHOUT PROPER PERMISSION FROM GOVERNMENT AUTHORITIES AT ALL LEVELS IN YOUR AREA. CHECK SECTION 13, "DISPOSAL CONSIDERATIONS/ENVIRONMENTAL PROTECTION PROCEDURES" FOR MORE INFORMATION.

SECTION 7 HANDLING AND STORAGE

PROTECT PRODUCT FROM MOISTURE, STORE IN COOL, DRY PLACE UNDER LOW RELATIVE HUMIDITY, AWAY FROM EXCESSIVE HEAT. STORE IN ORIGINAL OR EQUIVALENT WATER-PROOF CONTAINERS. RESEAL CONTAINERS TIGHTLY AFTER EACH USE. KEEP OUT OF DIRECT SUNLIGHT. AVOID HUMID OR WET CONDITIONS.

SHELF LIFE: INDEFINITE WHEN STORED CAREFULLY AS INSTRUCTED ABOVE.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

NOTE: WHEN SELECTING PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING, FOLLOW ALL OF THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS THAT APPLY TO YOUR SPECIFIC OPERATION AND PROCESSING CONDITIONS. TAKE INTO CONSIDERATION ALL WORKER CONDITIONS AND ALL CHEMICALS TO BE HANDLED OR PROCESSED.

EYE PROTECTION: WEAR SPLASH-PROOF CHEMICAL SAFETY GOGGLES. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS.

SKIN PROTECTION: WEAR CHEMICALLY RESISTANT RUBBER GLOVES, SELECTED WITH YOUR SPECIFIC PROCESSING CONDITIONS AND CHEMICALS TO BE HANDLED IN MIND. WEAR COVERALLS AND BOOTS TO MINIMIZE SKIN CONTACT. AS PRECAUTIONS, WASH HANDS & FACE WITH MILD SOAP & WATER BEFORE EATING, DRINKING, SMOKING, OR USING RESTROOM. AFTER EACH SHIFT, CLEAN ALL PROTECTIVE EQUIPMENT, WASH WORK CLOTHES AND SHOWER.

LUNG, THROAT & NASAL PROTECTION: WEAR NIOSH APPROVED DUST RESPIRATOR FOR YOUR PARTICULAR OPERATION AND MATERIALS BEING HANDLED. CLEAN RESPIRATOR WITH SOAP AND WATER AFTER EACH SHIFT.

OTHER PROTECTION: EYE WASH FOUNTAINS & DRENCH SHOWERS SHOULD BE LOCATED WITHIN 100 FEET OR A 10 SECOND WALK OF THE WORK AREA PER ANSI Z358.1-1990

VENTILATION: LOCAL EXHAUST IS RECOMMENDED.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION : RED POWDER; SLIGHT ODOR MELTING POINT : NE

WATER SOLUBILITY : SOLUBLE

PH : NE BULK DENSITY : NE % TOTAL VOC'S : 0 BULK DENSITY

% NON-VOLATILES : 100

: 0

SECTION 10 STABILITY AND REACTIVITY

STABLE : STABLE CONDITIONS TO AVOID : CONTACT WITH STRONG ACIDS

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

INCOMPATIBLE MATERIALS : NK

HAZARDOUS DECOMPOSITION PRODUCTS: BURNING CAN PRODUCE OXIDES OF CARBON. NITROGEN AND SULFUR. MAY EVOLVE CHLORINE GAS WHEN IN CONTACT WITH STRONG

SECTION 11 TOXICOLOGY INFORMATION

ORAL LD50 (RAT): > 5000 MG/KG

DERMAL LD50 (RAT): NE

INHALATION LC50 (RAT): NE

EYE EFFECTS (RABBIT): NON-IRRITATING 1 SKIN EFFECTS (RABBIT): NON-IRRITATING 1 BREATHING EFFECTS: NE. TAKE PRECAUTIONS.

CHECK SECTION 3 FOR ANY OTHER OBSERVATIONS, EXPECTATIONS OR COMMENTS.

1) NOTE: ALTHOUGH THIS PRODUCT IS NOT AN IRRITANT BASED ON ANIMAL STUDIES, INDIVIDUALS CAN STILL BECOME SENSITIVE TO, OR REACT TO ANY CHEMICALS IN THEIR WORK AREAS. IT IS RECOMMENDED THAT ALL WORKERS WEAR ALL PROTECTIVE CLOTHING & EQUIPMENT AS SHOWN IN SECTION 8 OF THIS MSDS. READ SECTION 8.

GENERAL PRECAUTIONS: ALWAYS PRACTICE GOOD INDUSTRIAL HYGIENE, HANDLE WITH CARE, AVOID PERSONAL CONTACT. DO NOT GET INTO EYES OR ON SKIN, DO NOT BREATHE DUST OF PRODUCT, DO NOT SWALLOW. WASH HANDS WITH SOAP AND WATER, AND RINSE WELL AFTER HANDLING PRODUCT. SHOWER AFTER EACH SHIFT. WASH ALL WORK CLOTHING AND COMPLETELY CLEAN ALL PROTECTIVE EQUIPMENT AFTER EACH SHIFT. READ SECTIONS 3 AND 8.

MUTAGENICITY: NK

ADDITIONAL INFORMATION: CHECK SECTION 3

MEDICAL CONDITIONS MADE WORSE BY EXPOSURE: PERSONS WITH BREATHING AND LUNG PROBLEMS CAN BE AFFECTED BY BREATHING IN ANY TYPE OF DUSTY MATERIAL. PERSONS WITH ASTHMA, ALLERGIES, OR OTHER BREATHING-RELATED PROBLEMS SHOULD STAY AWAY FROM, NOT HANDLE, AND NOT BE EXPOSED TO ANY DUSTY PRODUCTS OR DUSTY CONDITIONS AS A PRECAUTIONARY MEASURE.

SECTION 12 ECOLOGICAL DATA

BOD 5: NE

COD: NE

FISH TOXICITY: NE SEED TOXICITY: NE

CWA TOXIC POLLUTANTS: NK BIOLOGICAL ELIMINATION: NE

SECTION 13 DISPOSAL CONSIDERATIONS/ENVIRONMENTAL PROTECTION PROCEDURES

DISPOSAL METHODS:

IT IS RECOMMENDED THAT YOU SELECT AN ALTERNATIVE BELOW ACCORDING TO THE FOLLOWING ORDER OF PREFERENCE, DEPENDING ON ENVIRONMENTAL IMPACT:

- I) RECYCLE OR REWORK MATERIAL IF AT ALL POSSIBLE
- 2) INCINERATE MATERIAL AT AN APPROVED FACILITY
- 3) TREAT AT AN ACCEPTABLE WASTE TREATMENT FACILITY, OR MUNICIPAL WASTE TREATMENT PLANT AFTER PROPER TESTING & APPROVAL OF WASTE SAMPLES.

IF DISPOSED OF IN IT'S ORIGINAL UNUSED FORM, THIS MATERIAL SHOULD BE TREATED, AND DISPOSED OF AT AN APPROVED SITE OR FACILITY, IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE & LOCAL ENVIRONMENTAL REGULATIONS. YOU MUST CONTACT THE PROPER GOVERNMENT AGENCIES FOR ADDITIONAL DIRECTIONS. ALL WASTE MATERIAL & WASTE WATER SHOULD BE DISPOSED OF CORRECTLY, UNDER ALL FEDERAL, STATE, CITY & COUNTY LAWS.

RCRA STATUS: SEE SECTION 15, REGULATORY INFORMATION

DO NOT RELEASE ANY CHEMICALS, DYES OR OTHER COLOR SOLUTIONS INTO SEWERS, WATERWAYS OR SYSTEMS WITHOUT PROPER GOVERNMENT PERMISSION AT ALL LEVELS.

CONTAINER REUSE: AN "EMPTY" CONTAINER CAN CONTAIN PRODUCT RESIDUE, AND SHOULD NOT BE REUSED. IF NOT PROFESSIONALLY CLEANED & RECONDITIONED, CRUSHING OR OTHER MEANS IS RECOMMENDED TO PREVENT UNAUTHORIZED REUSE.

SECTION 14 SHIPPING/TRANSPORT INFORMATION

DOT STATUS (HIGHWAY AND RAIL): NR

IATA STATUS (AIR): NR

SECTION 15 REGULATORY INFORMATION

AICS (AUSTRALIA): NC

CAL. PROP. 65: CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR REPRODUCTIVE TOXICITY. (SEE CONEG SECTION BELOW).

CERCLA: NH

CLEAN AIR ACT:

TITLE III-HAP'S: NA

TITLE V-VOC'S: SEE SECTION 9

TITLE VI-ODC'S: NOT MANUFACTURED WITH NOR CONTAINING CLASS I OR II ODC'S.

CONEG: THE TOTAL OF CADMIUM, HEXAVALENT CHROMIUM, LEAD AND MERCURY

INCIDENTALLY PRESENT IN THIS PRODUCT DOES NOT EXCEED 100 PPM BY WEIGHT.

DSL (CANADA): COMPONENTS LISTED

ECL (KOREA): SERIAL #9206-248; SERIAL #9212-1367; SERIAL #9312-7649

EINECS (EUROPE): #222-657-4

ENCS (JAPAN): #5-1494

FDA STATUS: NL

OTHER TYPICAL DATA IN PPM: NK

RCRA: NOT HAZARDOUS IN IT'S PURCHASED FORM. HOWEVER, UNDER RCRA, IT IS THE PRODUCT USER'S RESPONSIBILITY TO DETERMINE AT TIME OF DISPOSAL IF ANY MATERIAL CONTAINING THE PRODUCT OR DERIVED FROM THE PRODUCT IS A HAZARDOUS WASTE.

SARA 311/312: IMMEDIATE/ACUTE HEALTH HAZARD : YES DELAYED/CHRONIC HEALTH HAZARD : NO

FIRE HAZARD : NO SUDDEN RELEASE OF PRESSURE HAZARD: NO

REACTIVITY HAZARD : NO

SARA 313: NR

TSCA: COMPONENTS LISTED

USDA: NL WHMIS: NC

SECTION 16 OTHER INFORMATION

ACRONYM LIST

NA = NOT APPLICABLE TO THIS MATERIAL

NC = NOT CERTAIN, UNDETERMINED

ND = NO DATA IS CURRENTLY AVAILABLE

NE = NOT ESTABLISHED, NO TESTING IS PLANNED

NH = NOT HAZARDOUS UNDER CITED REGULATIONS

NK = NONE KNOWN

NL = NOT LISTED OR APPROVED UNDER THESE REGULATIONS

NR = NOT REGULATED OR REPORTABLE

NIOSH = NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA

BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED, IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN. THIS MATERIAL SAFETY DATA SHEET WAS PREPARED TO COMPLY WITH THE OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200, AND SUPERSEDES ANY PREVIOUS INFORMATION. PREVIOUSLY DATED SHEETS ARE INVALID & UNAPPLICABLE.