



WATER SPECIALIST SUPPLY CO.,LTD.

Call : 034-440-851-3, 095-367-5790

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## MATERIAL SAFETY DATA SHEET

### OXALIC ACID

**PRODUCT:OXALIC ACID 99.6%**

#### SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

##### **WATER SPECIALIST SUPPLY CO.,LTD.**

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PREPARED BY..... Water Specialist Supply CO.,LTD  
PREPARATION DATE..... 14/July/16  
PRODUCT NAME.....OXALIC ACID 99.6%  
CHEMICAL FORMULA.....C<sub>2</sub>H<sub>2</sub>O<sub>4</sub>.2H<sub>2</sub>O.  
MOLECULAR WEIGHT.....126.0658.  
CHEMICAL FAMILY..... ORGANIC ACID.  
MATERIAL USE..... REFER TO TECHNICAL LITERATURE.  
EMERGENCY PHONE NO..... (+66)34-440-851 to 3 or (+66)95-367-5790

#### SECTION 02 : COMPOSITION/INFORMATION ON INGREDIENT

Hazardous Ingredients %	Exposure Limit	C.A.S.#
OXALIC ACID >99.6	SEE/VOIR	144-62-7

## SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:

SKIN CONTACT :CAN CAUSE SEVERE IRRITATION, POSSIBLE SKIN BURNS.

SKIN ABSORPTION:MAY BE ABSORBED THROUGH THE SKIN.

EYE CONTACT:OXALIC ACID IS AN EYE IRRITANT. IT MAY PRODUCE CORROSIVE EFFECTS.

INHALATION:HARMFUL IF INHALED. CAN CAUSE SEVERE IRRITATION AND BURNS OF NOSE, THROAT, AND RESPIRATORY TRACT.

INGESTION :TOXIC. MAY CAUSE BURNS, NAUSEA, SEVERE GASTROENTERITIS AND VOMITING, SHOCK AND CONVULSIONS. MAY CAUSE RENAL DAMAGE, AS EVIDENCED BY BLOODY URINE. ESTIMATED FATAL DOSE IS 5 TO 15 GRAMS. CONVULSION.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE : PERSONS WITH PRE-EXISTING SKIN DISORDERS OR EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THE SUBSTANCE.

EFFECTS OF ACUTE EXPOSURE : OXALIC ACID IS CORROSIVE TO TISSUE. WHEN INGESTED, OXALIC ACID REMOVES CALCIUM FROM THE BLOOD. KIDNEY DAMAGE CAN BE EXPECTED AS THE CALCIUM IS REMOVED FROM THE BLOOD IN THE FORM OF CALCIUM OXALATE. THE CALCIUM OXALATE THEN OBSTRUCTS THE KIDNEY TUBULES. THE PRODUCT IS NOT EXPECTED TO BE TOXIC BY INHALATION.

EFFECTS OF CHRONIC EXPOSURE: MAY CAUSE INFLAMMATION OF THE UPPER RESPIRATORY TRACT. PROLONGED SKIN CONTACT CAN CAUSE DERMATITIS, CYANOSIS OF THE FINGERS AND POSSIBLE ULCERATION. MAY AFFECT KIDNEYS.

## SECTION 04 : FIRST AID MEASURES

### INSTRUCTIONS:

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN IMMEDIATELY. INGESTION: DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL PHYSICIAN IMMEDIATELY. SKIN CONTACT: IN CASE OF CONTACT, WIPE OFF EXCESS MATERIAL FROM SKIN THEN IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. IMMEDIATELY CALL A PHYSICIAN. EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

## SECTION 05 : FIRE FIGHTING MEASURES

FLAMMABILITY : NON-FLAMMABLE.

IF YES, UNDER WHICH CONDITIONS?

EXTINGUISHING MEDIA : USE DRY CHEMICALS, CO<sub>2</sub>, ALCOHOL RESISTANT FOAM OR WATER SPRAY.

SPECIAL PROCEDURES : FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

FLASH POINT (C), METHOD : NON-FLAMMABLE.

AUTO IGNITION TEMPERATURE : NO DATA.

UPPER FLAMMABLE LIMIT (% BY VOL.) : N.AV.

LOWER FLAMMABLE LIMIT (% BY VOL.): N.AV.

### EXPLOSION DATA

EXPLOSIVE POWER : N.AV.

RATE OF BURNING : N.AV

SENSITIVITY TO STATIC DISCHARGE : N.AV.

SENSITIVITY TO IMPACT : N.AV.

HAZARDOUS COMBUSTION PRODUCTS : THERMAL DECOMPOSITION CAN PRODUCE IRRITATING AND HAZARDOUS FUMES INCLUDING FORMIC ACID, CARBON MONOXIDE, AND CARBON DIOXIDE

## SECTION 06 : ACCIDENTAL RELEASE MEASURES

LEAK/SPILL: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. SPILLS: CLEAN UP SPILLS IN A MANNER THAT DOES NOT DISPERSE DUST INTO THE AIR. USE NON-SPARKING TOOLS AND EQUIPMENT. PICK UP SPILL FOR RECOVERY OR DISPOSAL AND PLACE IN A CLOSED CONTAINER. REMOVE UNNECESSARY PEOPLE. IF MATERIAL COMES IN CONTACT WITH WATER, NEUTRALISE LIQUID WITH ALKALINE MATERIAL (SODA ASH, LIME), THEN ABSORB WITH AN INERT MATERIAL (E.G. VERMICULITE, DRY SAND, EARTH) AND PLACE IN A CHEMICAL WASTE CONTAINER. DO NOT USE COMBUSTIBLE MATERIALS, SUCH AS SAW DUST. DO NOT FLUSH TO SEWER.

## SECTION 07 : HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT : KEEP IN A TIGHTLY CLOSED CONTAINER. PROTECT FROM PHYSICAL DAMAGE. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (DUST, SOLIDS). OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

STORAGE NEEDS : STORE IN A COOL, DRY, VENTILATED AREA AWAY FROM SOURCES OF HEAT, MOISTURE AND INCOMPATIBILITIES.

## SECTION 08 : EXPOSE CONTROL/PERSONAL PROTECTION

GLOVES/ TYPE :WEAR IMPERVIOUS GLOVES.

RESPIRATORY/TYPE :

IF THE EXPOSURE LIMIT IS EXCEEDED, A HALF-FACE RESPIRATOR WITH AN ORGANIC VAPOUR CARTRIDGE AND DUST/MIST FILTER MAY BE WORN FOR UP TO 10 TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. A FULL-FACE PIECE RESPIRATOR WITH AN ORGANIC VAPOUR CARTRIDGE AND DUST/MIST FILTER MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT, OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL-FACEPIECE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

EYE/TYPE : USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF SOLUTIONS IS POSSIBLE.

FOOTWEAR/TYPE : SEE BELOW.

CLOTHING/TYPE : WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT.

OTHER/TYPE : MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

ENGINEERING CONTROLS :

A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, INDUSTRIAL VENTILATION, A MAN

## SECTION 09 : PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE : MONOCLINIC TABLETS, PRISMS, GRANULES.

ODOUR : N.AV.

ODOUR THRESHOLD : N.AV.

VAPOUR PRESSURE (MMHG) : <0.001. @ 20(C).

VAPOUR DENSITY (AIR=1) : 4.4.

EVAPORATION RATE : N.AV.

BOILING POINT : 149 -160 C (300 - 320 F). (SUBLIMES).

MELTING POINT (C) : 101 - 102 C.

PH : 1.3 (0.1 M SOLUTION).

SPECIFIC GRAVITY (WATER=1):1.653.

SOLUBILITY IN WATER (% W/W):ONE GRAM DISSOLVES IN ABOUT 7 ML WATER, 2 ML BOILING WATER.

COEFFICIENT OF WATER/OIL DIST :N.AV.

## SECTION 10:STABILITY AND REACTIVITY

CHEMICAL STABILITY:

YES:STABLE.

NO, WHICH CONDITIONS? :HEAT, IGNITION SOURCES AND INCOMPATIBILITIES.

COMPATIBILITY WITH OTHER SUBSTANCES:

YES

NO, WHICH ONES? : ALKALIS, CHLORITES, SILVER AND STRONG OXIDIZING MATERIALS.

REACTIVITY CONDITIONS? : REACTS WITH CHLORITES, HYPOCHLORITES. VIOLENT REACTIONS MAY OCCUR IN CONTACT WITH SILVER, NHX, -OH, AND SH GROUPS.

HAZARDOUS POLYMERIZATION : WILL NOT OCCUR.

HAZARDOUS PRODUCTS OF DECOMPOSITION :

THERMAL DECOMPOSITION CAN PRODUCE IRRITATING AND HAZARDOUS FUMES INCLUDING FORMIC ACID, CARBON MONOXIDE, AND CARBON DIOXIDE.

## SECTION 11 : TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL :OXALIC ACID: ACGIH TLV: 1 MG/M3; OSHA PEL: 1MG/M3; ACGIH STEL: 2 MG/M3.

LC 50 OF MATERIAL, SPECIES & ROUTE : N.AV.

LD 50 OF MATERIAL, SPECIES & ROUTE : LD50 (ORAL-RAT):. 375 MG/KG.

CARCINOGENICITY OF MATERIAL : N.AV.

REPRODUCTIVE EFFECTS : N.AV.

IRRITANCY OF MATERIAL : SEE SECTION 03.

SENSITIVE CAPABILITY OF MATERIAL: N.AV.

SYNERGISTIC MATERIALS : N.AV.

## SECTION 12 : ECOLOGICAL CONSIDERATION

NO INFORMATION AVAILABLE.

## SECTION 13 : DISPOSAL CONSIDERATION

WASTE DISPOSAL : DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, PROVINCIAL, AND LOCAL ENVIRONMENTAL REGULATIONS.

## SECTION 14 : TRANSPORT INFORMATION

TDG CLASSIFICATION : NOT REGULATED.

SPECIAL SHIPPING INSTRUCTIONS : N.A.P.

## SECTION 15 : REGULATORY INFORMATION

WHMIS CLASSIFICATION : D1B. E.

CPR COMPLIANCE : THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

## SECTION 16 : OTHER INFORMATION

N.AV.=NOT AVAILABLE

N.AP.=NOT APPLICABLE

### Disclaimer :

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