



MURSATT CHEMICALS LIMITED  
11 REGALCREST COURT  
WOODBIDGE, ONTARIO, CANADA, L4L 8P3  
(905)-850-8444

PRODUCT: SHIELD

CODE: MUR0044

### SECTION 01: IDENTIFICATION

PRODUCT CODE..... MUR0044  
 PRODUCT IDENTIFIER..... SHIELD  
 OTHER MEANS OF IDENTIFICATION..... N.AV.  
 RECOMMENDED USE AND ..... N.AV.  
 RESTRICTIONS ON USE  
 SUPPLIER IDENTIFIER..... MURSATT CHEMICALS LIMITED  
 11 REGALCREST COURT  
 WOODBRIDGE, ONTARIO  
 CANADA  
 L4L 8P3  
 EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

### SECTION 02: HAZARD IDENTIFICATION



HAZARD CLASSIFICATION..... CORROSIVE TO METALS - CATEGORY 1 . SERIOUS EYE DAMAGE - CATEGORY 1.  
 SKIN IRRITATION — CATEGORY 2.  
 SIGNAL WORD..... DANGER.  
 HAZARD STATEMENT..... H290 MAY BE CORROSIVE TO METALS. H315 CAUSES SKIN IRRITATION. H318  
 CAUSES SERIOUS EYE DAMAGE.  
 PRECAUTIONARY STATEMENT..... P234 KEEP ONLY IN ORIGINAL CONTAINER. P390 ABSORB SPILLAGE TO PREVENT  
 MATERIAL DAMAGE. P406 STORE IN CORROSIVE RESISTANT CONTAINER WITH A  
 RESISTANT INNER LINER. P264 WASH SKIN THOROUGHLY AFTER HANDLING. P280  
 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE  
 PROTECTION. P302+P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.  
 P332+P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ATTENTION.  
 P362+P364 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE.  
 P305+P351+P338+P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR  
 SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO.  
 CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER OR  
 DOCTOR/PHYSICIAN. P321 SPECIFIC TREATMENT (SEE SUPPLEMENTAL FIRST AID  
 INSTRUCTIONS ON THE SAFETY DATA SHEET).  
 OTHER HAZARDS..... NONE.

### SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENTS                     | CAS #      | WT. % |
|---|------------|-------|
| 1-HYDROXYETHYLIDENE-1,1-DIPHOSPHONIC ACID | 2809-21-4  | 5-7   |
| PHOSPHONIC ACID                           | 13598-36-2 | <1    |
| SODIUM HEXAMETAPHOSPHATE                  | 68915-31-1 | 33-34 |

### SECTION 04: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:  
 EYE CONTACT..... GET MEDICAL ATTENTION IMMEDIATELY. CALL A POISON CENTER OR PHYSICIAN.  
 IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER, OCCASIONALLY LIFTING  
 THE UPPER AND LOWER EYELIDS. CHECK FOR AND REMOVE ANY CONTACT  
 LENSES. CONTINUE TO RINSE FOR AT LEAST 10 MINUTES. CHEMICAL BURNS  
 MUST BE TREATED PROMPTLY BY A PHYSICIAN.  
 SKIN CONTACT..... GET MEDICAL ATTENTION IMMEDIATELY. CALL A POISON CENTER OR PHYSICIAN.  
 WASH CONTAMINATED SKIN WITH SOAP AND WATER. REMOVE CONTAMINATED  
 CLOTHING AND SHOES. WASH CONTAMINATED CLOTHING THOROUGHLY WITH

PRODUCT: SHIELD

CODE: MUR0044

**SECTION 04: FIRST AID MEASURES**

|  |  |
|--|--|
| SKIN CONTACT.....  | WATER BEFORE REMOVING IT, OR WEAR GLOVES. CONTINUE TO RINSE FOR AT LEAST 10 MINUTES. CHEMICAL BURNS MUST BE TREATED PROMPTLY BY A PHYSICIAN. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE.  |
| INHALATION.....  | GET MEDICAL ATTENTION IMMEDIATELY. CALL A POISON CENTER OR PHYSICIAN. REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IF IT IS SUSPECTED THAT FUMES ARE STILL PRESENT, THE RESCUER SHOULD WEAR AN APPROPRIATE MASK OR SELF-CONTAINED BREATHING APPARATUS. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION OR OXYGEN BY TRAINED PERSONNEL. IT MAY BE DANGEROUS TO THE PERSON PROVIDING AID TO GIVE MOUTH-TO-MOUTH RESUSCITATION. IF UNCONSCIOUS, PLACE IN RECOVERY POSITION AND GET MEDICAL ATTENTION IMMEDIATELY. MAINTAIN AN OPEN AIRWAY. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND.  |
| INGESTION.....   | GET MEDICAL ATTENTION IMMEDIATELY. CALL A POISON CENTER OR PHYSICIAN. WASH OUT MOUTH WITH WATER. REMOVE DENTURES IF ANY. REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IF MATERIAL HAS BEEN SWALLOWED AND THE EXPOSED PERSON IS CONSCIOUS, GIVE SMALL QUANTITIES OF WATER TO DRINK. STOP IF THE EXPOSED PERSON FEELS SICK AS VOMITING MAY BE DANGEROUS. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. IF VOMITING OCCURS, THE HEAD SHOULD BE KEPT LOW SO THAT VOMIT DOES NOT ENTER THE LUNGS. CHEMICAL BURNS MUST BE TREATED PROMPTLY BY A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF UNCONSCIOUS, PLACE IN RECOVERY POSITION AND GET MEDICAL ATTENTION IMMEDIATELY. MAINTAIN AN OPEN AIRWAY. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND. |
| MOST IMPORTANT SYMPTOMS AND .....<br>EFFECTS, ACUTE OR DELAYED:                  | EYE CONTACT: CAUSES SERIOUS EYE DAMAGE. INHALATION: EXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SERIOUS EFFECTS MAY BE DELAYED FOLLOWING EXPOSURE. SKIN CONTACT: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS. INGESTION: MAY CAUSE BURNS TO MOUTH, THROAT AND STOMACH.  |
| INDICATION OF ANY IMMEDIATE MEDICAL<br>ATTENTION AND SPECIAL TREATMENT<br>NEEDED | NOTES TO PHYSICIAN - NO SPECIFIC TREATMENT. TREAT SYMPTOMATICALLY. CONTACT POISON TREATMENT SPECIALIST IMMEDIATELY IF LARGE QUANTITIES HAVE BEEN INGESTED OR INHALED. NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. IF IT IS SUSPECTED THAT FUMES ARE STILL PRESENT, THE RESCUER SHOULD WEAR AN APPROPRIATE MASK OR SELF-CONTAINED BREATHING APPARATUS. IT MAY BE DANGEROUS TO THE PERSON PROVIDING AID TO GIVE MOUTH-TO-MOUTH RESUSCITATION. WASH CONTAMINATED CLOTHING THOROUGHLY WITH WATER BEFORE REMOVING IT, OR WEAR GLOVES.  |

**SECTION 05: FIRE FIGHTING MEASURES**

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|--|--|
| SUITABLE EXTINGUISHING MEDIA.....  | CO <sub>2</sub> , EXTINGUISHING POWDER OR WATER SPRAY. FIGHT LARGER FIRES WITH WATER SPRAY OR ALCOHOL RESISTANT FOAM.  |
| UNSUITABLE EXTINGUISHING MEDIA.....  | NONE KNOWN.  |
| SPECIAL HAZARDS ARISING FROM THE<br>PRODUCT:<br>HAZARDOUS COMBUSTION PRODUCTS.<br>SPECIAL PROTECTIVE EQUIPMENT AND<br>PRECAUTIONS FOR FIRE-FIGHTERS: | IN A FIRE OR IF HEATED, A PRESSURE INCREASE WILL OCCUR AND THE CONTAINER MAY BURST.<br>OXIDES OF PHOSPHORUS. OXIDES OF CARBON.<br>PROMPTLY ISOLATE THE SCENE BY REMOVING ALL PERSONS FROM THE VICINITY OF THE INCIDENT IF THERE IS A FIRE. NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING.<br>FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE. |

**SECTION 06: ACCIDENTAL RELEASE MEASURES**

|                                |   |
|--------------------------------|---|
| PERSONAL PRECAUTIONS.....      | NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. EVACUATE SURROUNDING AREAS. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING. DO NOT TOUCH OR WALK THROUGH SPILLED MATERIAL. DO NOT BREATHE VAPOR OR MIST. PROVIDE ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. |
| ENVIRONMENTAL PRECAUTIONS..... | AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. INFORM THE RELEVANT AUTHORITIES IF THE PRODUCT HAS CAUSED ENVIRONMENTAL POLLUTION (SEWERS, WATERWAYS, SOIL OR AIR).   |

PRODUCT: SHIELD

CODE: MUR0044

**SECTION 06: ACCIDENTAL RELEASE MEASURES**

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP ..... SMALL SPILL: STOP LEAK IF WITHOUT RISK. MOVE CONTAINERS FROM SPILL AREA. DILUTE WITH WATER AND MOP UP IF WATER-SOLUBLE. ALTERNATIVELY, OR IF WATER- INSOLUBLE, ABSORB WITH AN INERT DRY MATERIAL AND PLACE IN AN APPROPRIATE WASTE DISPOSAL CONTAINER. ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR. LARGE SPILL: STOP LEAK IF WITHOUT RISK. MOVE CONTAINERS FROM SPILL AREA. ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE. APPROACH RELEASE FROM UPWIND. PREVENT ENTRY INTO SEWERS, WATER COURSES, BASEMENTS OR CONFINED AREAS. WASH SPILLAGES INTO AN EFFLUENT TREATMENT PLANT OR PROCEED AS FOLLOWS. CONTAIN AND COLLECT SPILLAGE WITH NON-COMBUSTIBLE, ABSORBENT MATERIAL, E.G. SAND, EARTH, VERMICULITE OR DIATOMACEOUS EARTH AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13). THE SPILLED MATERIAL MAY BE NEUTRALIZED WITH SODIUM CARBONATE, SODIUM BICARBONATE OR SODIUM HYDROXIDE. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR. CONTAMINATED ABSORBENT MATERIAL MAY POSE THE SAME HAZARD AS THE SPILLED PRODUCT. NOTE: SEE SECTION 1 FOR EMERGENCY CONTACT INFORMATION AND SECTION 13 FOR WASTE DISPOSAL.

**SECTION 07: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING:..... PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). DO NOT GET IN EYES OR ON SKIN OR CLOTHING. DO NOT BREATHE VAPOR OR MIST. DO NOT INGEST. IF DURING NORMAL USE THE MATERIAL PRESENTS A RESPIRATORY HAZARD, USE ONLY WITH ADEQUATE VENTILATION OR WEAR APPROPRIATE RESPIRATOR. KEEP IN THE ORIGINAL CONTAINER OR AN APPROVED ALTERNATIVE MADE FROM A COMPATIBLE MATERIAL, KEPT TIGHTLY CLOSED WHEN NOT IN USE. KEEP AWAY FROM ALKALIS. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND CAN BE HAZARDOUS. DO NOT REUSE CONTAINER. ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE.

CONDITIONS FOR SAFE STORAGE, ..... STORE IN ACCORDANCE WITH LOCAL REGULATIONS. STORE IN ORIGINAL INCLUDING ANY INCOMPATIBILITIES: CONTAINER PROTECTED FROM DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS (SEE SECTION 10) AND FOOD AND DRINK. STORE IN CORROSIVE RESISTANT CONTAINER WITH A RESISTANT INNER LINER. STORE LOCKED UP. SEPARATE FROM ALKALIS. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. CONTAINERS THAT HAVE BEEN OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE IN UNLABELED CONTAINERS. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION. DO NOT STORE BELOW 0 °C.

**SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

| INGREDIENTS                                      | TWA   | ACGIH TLV<br>STEL | PEL   | OSHA PEL<br>STEL | REL   | NIOSH |
|--|-------|-------------------|-------|------------------|-------|-------|
| 1-HYDROXYETHYLIDEN<br>E-1,1-DIPHOSPHONIC<br>ACID | N.AV. | N.AV.             | N.AV. | N.AV.            | N.AV. | N.AV. |
| PHOSPHONIC ACID                                  | N.AV. | N.AV.             | N.AV. | N.AV.            | N.AV. | N.AV. |
| SODIUM<br>HEXAMETAPHOSPHATE                      | N.AV. | N.AV.             | N.AV. | N.AV.            | N.AV. | N.AV. |

APPROPRIATE ENGINEERING CONTROLS IF USER OPERATIONS GENERATE DUST, FUMES, GAS, VAPOR OR MIST, USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS. EMISSIONS FROM VENTILATION OR WORK PROCESS EQUIPMENT SHOULD BE CHECKED TO ENSURE THEY COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION LEGISLATION. IN SOME CASES, FUME SCRUBBERS, FILTERS OR ENGINEERING MODIFICATIONS TO THE PROCESS EQUIPMENT WILL BE NECESSARY TO REDUCE EMISSIONS TO ACCEPTABLE LEVELS.

INDIVIDUAL PROTECTION MEASURE SUCH AS PERSONAL PROTECTIVE EQUIPMENTS:

PRODUCT: SHIELD

CODE: MUR0044

**SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

|                             |   |
|-----------------------------|---|
| HAND PROTECTION.....        | CHEMICAL-RESISTANT, IMPERVIOUS GLOVES COMPLYING WITH AN APPROVED STANDARD SHOULD BE WORN AT ALL TIMES WHEN HANDLING CHEMICAL PRODUCTS IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. CONSIDERING THE PARAMETERS SPECIFIED BY THE GLOVE MANUFACTURER, CHECK DURING USE THAT THE GLOVES ARE STILL RETAINING THEIR PROTECTION. IT SHOULD BE NOTED THAT THE TIME TO BREAKTHROUGH FOR ANY GLOVE MATERIAL MAY BE DIFFERENT FOR DIFFERENT GLOVE MANUFACTURERS. IN THE CASE OF MIXTURES, CONSISTING OF SEVERAL SUBSTANCES, THE PROTECTION TIME OF THE GLOVES CANNOT BE ACCURATELY ESTIMATED. |
| RESPIRATORY PROTECTION..... | USE A PROPERLY FITTED, AIR-PURIFYING OR AIR-FED RESPIRATOR COMPLYING WITH AN APPROVED STANDARD IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. RESPIRATOR SELECTION MUST BE BASED ON KNOWN OR ANTICIPATED EXPOSURE LEVELS, THE HAZARDS OF THE PRODUCT AND THE SAFE WORKING LIMITS OF THE SELECTED RESPIRATOR.   |
| EYE PROTECTION.....         | SAFETY EYEWEAR COMPLYING WITH AN APPROVED STANDARD SHOULD BE USED WHEN A RISK ASSESSMENT INDICATES THIS IS NECESSARY TO AVOID EXPOSURE TO LIQUID SPLASHES, MISTS, GASES OR DUSTS. IF CONTACT IS POSSIBLE, THE FOLLOWING PROTECTION SHOULD BE WORN, UNLESS THE ASSESSMENT INDICATES A HIGHER DEGREE OF PROTECTION: CHEMICAL SPLASH GOGGLES AND/OR FACE SHIELD. IF INHALATION HAZARDS EXIST, A FULL-FACE RESPIRATOR MAY BE REQUIRED INSTEAD.  |
| PROTECTIVE CLOTHING.....    | PERSONAL PROTECTIVE EQUIPMENT FOR THE BODY SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT.   |
| PROTECTIVE FOOTWEAR.....    | APPROPRIATE FOOTWEAR AND ANY ADDITIONAL SKIN PROTECTION MEASURES SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT.   |
| OTHER.....                  | ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.  |
| HYGIENIC PRACTICES.....     | WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING THE LAVATORY AND AT THE END OF THE WORKING PERIOD. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE POTENTIALLY CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE REUSING. EATING, DRINKING AND SMOKING SHOULD BE PROHIBITED IN AREAS WHERE THIS MATERIAL IS HANDLED, STORED AND PROCESSED. WORKERS SHOULD WASH HANDS AND FACE BEFORE EATING, DRINKING AND SMOKING. REMOVE CONTAMINATED CLOTHING AND PROTECTIVE EQUIPMENT BEFORE ENTERING EATING AREAS. .             |

**SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

|                                      |                     |
|--------------------------------------|---------------------|
| PHYSICAL STATE.....                  | LIQUID.             |
| COLOR.....                           | WHITE TO YELLOWISH. |
| ODOUR.....                           | CHARACTERISITC.     |
| ODOUR THRESHOLD.....                 | N.AV.               |
| PH.....                              | N.AV.               |
| FREEZING/MELTING POINT.....          | N.AV.               |
| BOILING POINT.....                   | N.AV.               |
| FLASH POINT (C), METHOD.....         | N.AP.               |
| EVAPORATION RATE.....                | N.AV.               |
| FLAMMABILITY (SOLIDS AND GASES)..... | N.AV.               |
| UPPER FLAMMABLE LIMIT (% BY VOL.)... | N.AP.               |
| LOWER FLAMMABLE LIMIT (% BY VOL.)... | N.AP.               |
| VAPOUR PRESSURE (MMHG).....          | N.AV.               |
| VAPOUR DENSITY (AIR=1).....          | N.AV.               |
| RELATIVE DENSITY.....                | N.AV.               |
| SOLUBILITY IN WATER (% W/W).....     | MISCIBLE IN WATER.  |
| COEFFICIENT OF WATER/OIL DIST.....   | N.AV.               |
| AUTO IGNITION TEMPERATURE.....       | N.AV.               |
| DECOMPOSITION TEMPERATURE.....       | N.AV.               |
| VISCOSITY.....                       | N.AV.               |

**SECTION 10: STABILITY AND REACTIVITY**

|  |   |
|--|---|
| REACTIVITY:.....                         | HAZARDOUS POLYMERISATION WILL NOT OCCUR.  |
| CHEMICAL STABILITY:.....                 | THIS PRODUCT IS STABLE.   |
| POSSIBILITY OF HAZARDOUS REACTIONS:..... | UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS REACTIONS WILL NOT OCCUR. |
| CONDITIONS TO AVOID.....                 | CONTACT WITH ICOMPATIBLES.  |

PRODUCT: SHIELD

CODE: MUR0044

**SECTION 10: STABILITY AND REACTIVITY**

INCOMPATIBLE MATERIALS:..... ATTACKS MANY METALS PRODUCING EXTREMELY FLAMMABLE HYDROGEN GAS WHICH CAN FORM EXPLOSIVE MIXTURES WITH AIR. REACTIVE OR INCOMPATIBLE WITH ALKALIS, METALS.

HAZARDOUS PRODUCTS OF ..... UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED.

**SECTION 11: TOXICOLOGICAL INFORMATION**

| INGREDIENTS                               | LC50   | LD50  |
|---|--|---|
| 1-HYDROXYETHYLIDENE-1,1-DIPHOSPHONIC ACID | N.AV.  | 1878 MG/KG (ORAL, RAT); > 6000 MG/KG (DERMAL, RABBIT) |
| PHOSPHONIC ACID                           | N.AV.  | 1580 MG/KG (ORAL, RAT)                                |
| SODIUM HEXAMETAPHOSPHATE                  | N.AV.  | 3053 MG/KG (ORAL, RAT)                                |
| INFORMATION ON LIKELY ROUTES OF ENTRY:    |  |   |
| SKIN CONTACT.....                         | ADVERSE SYMPTOMS MAY INCLUDE PAIN OR IRRITATION, REDNESS, BLISTERING MAY OCCUR.                                  |   |
| SKIN ABSORPTION.....                      | N.AV.  |   |
| EYE CONTACT.....                          | CAUSES SERIOUS EYE DAMAGE. ADVERSE SYMPTOMS MAY INCLUDE PAIN, WATERING, REDNESS.                                 |   |
| INHALATION.....                           | EXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SERIOUS EFFECTS MAY BE DELAYED FOLLOWING EXPOSURE. |   |
| INGESTION.....                            | MAY CAUSE BURNS TO MOUTH, THROAT AND STOMACH. ADVERSE SYMPTOMS MAY INCLUDE STOMACH PAINS.                        |   |
| EFFECTS OF ACUTE EXPOSURE.....            | SEE ABOVE.   |   |
| EFFECTS OF CHRONIC EXPOSURE.....          | N.AV.  |   |
| SIGNS AND SYMPTOMS OF OVEREXPOSURE        |  |   |
| CARCINOGENICITY OF MATERIAL.....          | COMPONENTS ARE NOT LISTED CARCINOGENS.   |   |
| TERATOGENICITY.....                       | N.AV.  |   |
| MUTAGENICITY.....                         | N.AV.  |   |
| REPRODUCTIVE EFFECTS.....                 | N.AV.  |   |
| SENSITIZING CAPABILITY OF MATERIAL.....   | N.AV.  |   |
| SYNERGISTIC MATERIALS.....                | N.AV.  |   |

**SECTION 12: ECOLOGICAL CONSIDERATIONS**

ECOTOXICITY..... N.AV.

PERSISTENCE AND DEGRADATION..... N.AV.

BIOACCUMULATIVE POTENTIAL..... N.AV.

MOBILITY IN SOIL..... N.AV.

OTHER ADVERSE EFFECTS..... N.AV.

**SECTION 13: DISPOSAL CONSIDERATIONS**

WASTE TREATMENT METHODS:..... DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

**SECTION 14: TRANSPORT INFORMATION**

UN NUMBER..... 3265.

PROPER SHIPPING NAME..... CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-HYDROXYEHTYLIDENE-1,1-DIPHOSPHORIC ACID).

TDG CLASSIFICATION..... 8.

PACKING GROUP..... III.

ENVIRONMENTAL HAZARDS ACCORDING TO THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE AND THE UNITED NATIONS MODEL REGULATIONS: N.AV.

SPECIAL PRECAUTIONS IN CONNECTION WITH TRANSPORT OR CONVEYANCE EITHER WITHIN OR OUTSIDE THE PREMISES: N.AV.

PRODUCT: SHIELD

CODE: MUR0044

**SECTION 15: REGULATORY INFORMATION**

SAFETY, HEALTH AND ENVIRONMENTAL N.A.V.  
REGULATIONS SPECIFIC TO THE  
PRODUCT:

**SECTION 16: OTHER INFORMATION**

N.A.V.=NOT AVAILABLE  
N.AP.=NOT APPLICABLE  
OTHER INFORMATION.....

THE DATA IN THIS MSDS RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS. THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

PREPARED BY..... REGULATORY AFFAIRS  
PREPARATION DATE..... JAN 1/2024