# Chem-Impex International Inc.

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# SAFETY DATA SHEET

#### SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 36268

NAME: Bis(tetrabutylammonium) dichromate

SYNONYMS: Tetrabutylammonium dichromate

24 HOUR EMERGENCY

TELEPHONE:

(800) 535-5053(USA)

352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE:

(630) 766-2112

# SECTION 2. HAZARDS IDENTIFICATION

# CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) OXIDIZING SOLIDS (CATEGORY 2), H272 SKIN SENSITISATION (CATEGORY 1), H317 CARCINOGENICITY (CATEGORY 1B), H350

SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 1), H400 LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 1), H410

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

# GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

**PICTOGRAM** 

SIGNAL WORD DANGER

# **HAZARD STATEMENT(S)**

H272 MAY INTENSIFY FIRE; OXIDISER.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H350 MAY CAUSE CANCER.

H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING

EFFECTS.

#### PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE

BEEN READ AND UNDERSTOOD.

P210 KEEP AWAY FROM HEAT.

P220 KEEP/STORE AWAY FROM CLOTHING/ COMBUSTIBLE

MATERIALS.

P221 TAKE ANY PRECAUTION TO AVOID MIXING WITH

COMBUSTIBLES.

P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/

SPRAY.

P272 CONTAMINATED WORK CLOTHING MUST NOT BE

ALLOWED OUT OF THE WORKPLACE.

P273 AVOID RELEASE TO THE ENVIRONMENT.

P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE

PROTECTION/ FACE PROTECTION.

P302 + P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER. P308 + P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/

ATTENTION.

P333 + P313 IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL

ADVICE/ ATTENTION.

P363 WASH CONTAMINATED CLOTHING BEFORE REUSE. P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR

ALCOHOL-RESISTANT FOAM TO EXTINGUISH.

P391 COLLECT SPILLAGE. P405 STORE LOCKED UP.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED

WASTE DISPOSAL PLANT.

HAZARDS NOT NONE

**OTHERWISE** 

CLASSIFIED (HNOC) OR NOT COVERED

BY GHS

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: C<sub>32</sub>H<sub>72</sub>Cr<sub>2</sub>N<sub>2</sub>O<sub>7</sub>

MW: 700.92

CAS-NO. 56660-19-6

**PURITY**:  $\geq 99\%$ 

#### **HAZARDOUS COMPONENTS**

| COMPONENT                          | CLASSIFICATION             | CONCENTRATION |  |  |  |  |
|------------------------------------|----------------------------|---------------|--|--|--|--|
| Bis(tetrabutylammonium) dichromate |                            |               |  |  |  |  |
|                                    | OX. SOL. 2; SKIN SENS. 1;  | <= 100%       |  |  |  |  |
|                                    | CARC. 1B; AQUATIC ACUTE 1; |               |  |  |  |  |
|                                    | AQUATIC CHRONIC 1; H272,   |               |  |  |  |  |
|                                    | H317, H350, H400, H410 M-  |               |  |  |  |  |
|                                    | FACTOR - AQUATIC ACUTE: 10 |               |  |  |  |  |

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

# SECTION 4. FIRST-AID MEASURES

**CONTACT** 

## **DESCRIPTION OF FIRST AID MEASURES**

CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA **GENERAL ADVICE** 

SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT

OF DANGEROUS AREA.

IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF IF INHALED

NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

CONSULT A PHYSICIAN.

IN CASE OF SKIN WASH OFF WITH SOAP AND PLENTY OF WATER.

**CONTACT** CONSULT A PHYSICIAN.

IN CASE OF EYE FLUSH EYES WITH WATER AS A PRECAUTION.

IF SWALLOWED NEVER GIVE ANYTHING BY MOUTH TO AN

UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER.

CONSULT A PHYSICIAN.

MOST IMPORTANT THE MOST IMPORTANT KNOWN SYMPTOMS AND **SYMPTOMS AND** 

EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

SECTION 2.2) AND/OR IN SECTION 11

EFFECTS, BOTH ACUTE AND DELAYED

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED NO DATA AVAILABLE

#### SECTION 5. FIRE AND EXPLOSION DATA

**EXTINGUISHING MEDIA** 

SUITABLE USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

**EXTINGUISHING MEDIA** CHEMICAL OR CARBON DIOXIDE.

SPECIAL HAZARDS CARBON OXIDES, NITROGEN OXIDES (NOX),

ARISING FROM THE CHROMIUM OXIDES

SUBSTANCE OR MIXTURE

ADVICE FOR WEAR SELF-CONTAINED BREATHING APPARATUS FOR

**FIREFIGHTERS** FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONALUSE PERSONAL PROTECTIVE EQUIPMENT. AVOIDPRECAUTIONS,DUST FORMATION. AVOID BREATHING VAPOURS, MISTPROTECTIVEOR GAS. ENSURE ADEQUATE VENTILATION.EQUIPMENT ANDEVACUATE PERSONNEL TO SAFE AREAS. AVOID

**EMERGENCY** BREATHING DUST. **PROCEDURES** 

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL** PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

DISCHARGE INTO THE ENVIRONMENT MUST BE

AVOIDED.

METHODS ANDSWEEP UP AND SHOVEL. CONTAIN SPILLAGE, ANDMATERIALS FORTHEN COLLECT WITH AN ELECTRICALLY PROTECTEDCONTAINMENT ANDVACUUM CLEANER OR BY WET- BRUSHING ANDCLEANING UPPLACE IN CONTAINER FOR DISPOSAL ACCORDING TO

LOCAL REGULATIONS (SEE SECTION 13). KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

## **SECTION 7. HANDLING AND STORAGE**

HANDLING

PRECAUTIONS FOR SAFE FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS.

THE POTENTIAL FOR COMBUSTIBLE DUST

FORMATION SHOULD BE TAKEN INTO

CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS.AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED.KEEP AWAY FROM

FROM HEAT AND SOURCES OF IGNITION. FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE** STORAGE, INCLUDING ANY INCOMPATIBILITIES KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND

SOURCES OF IGNITION - NO SMOKING.KEEP AWAY

WELL-VENTILATED PLACE.

Store at RT

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2

NO OTHER SPECIFIC USES ARE STIPULATED

#### **SECTION 8.** EXPOSURE CONTROLS/PERSONAL PROTECTION

# **CONTROL PARAMETERS**

# COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

| COMPONENT               | CAS-NO.    | VALUE  | CONTROL         | BASIS                  |
|-------------------------|------------|--|-----------------|------------------------|
|                         |            |  | PARAMETERS      |                        |
|                         | REMARKS    | SEE TAE                                      | BLE Z-2 FOR THE | EXPOSURE LIMIT FOR ANY |
|                         |            | OPERAT                                       | IONS OR SECTO   | RS WHERE THE EXPOSURE  |
|                         |            | LIMIT IN 1910.1026 IS STAYED OR IS OTHERWISE |                 |                        |
|                         |            | NOT IN EFFECT                                |                 |                        |
|                         |            | SUBSTANCE LISTED; FOR MORE INFORMATION SEE   |                 |                        |
|                         |            | OSHA DOCUMENT                                |                 |                        |
|                         |            | 1910.1026                                    |                 |                        |
| Bis(tetrabutylammonium) | 56660-19-6 | PEL  | 0.005 MG/M3     | OSHA SPECIFICALLY      |
| dichromate              |            |  |                 | REGULATED              |
|                         |            |  |                 | CHEMICALS/CARCINOGENS  |

| 1910.1026 THIS STANDARD APPLIES TO OCCUPATIONAL EXPOSURES TO CHROMIUM (VI) IN ALL FORMS AND COMPOUNDS IN GENERAL INDUSTRY, EXCEPT: (A) EXPOSURES THAT OCCUR IN THE APPLICATION OF PESTICIDES REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY OR ANOTHER FEDERAL GOVERNMENT AGENCY (E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS SEE SECTIONS 1532.2, 5206 & 8359 |  | 101010                                      |                  |                        |  |  |
|---|--|---|------------------|------------------------|--|--|
| EXPOSURES TO CHROMIUM (VI) IN ALL FORMS AND COMPOUNDS IN GENERAL INDUSTRY, EXCEPT: (A) EXPOSURES THAT OCCUR IN THE APPLICATION OF PESTICIDES REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY OR ANOTHER FEDERAL GOVERNMENT AGENCY (E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME-WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE.  CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   | •                |                        |  |  |
| COMPOUNDS IN GENERAL INDÚSTRY, EXCEPT: (A) EXPOSURES THAT OCCUR IN THE APPLICATION OF PESTICIDES REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY OR ANOTHER FEDERAL GOVERNMENT AGENCY (E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
| EXPOSURES THAT OCCUR IN THE APPLICATION OF PESTICIDES REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY OR ANOTHER FEDERAL GOVERNMENT AGENCY (E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME-WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE.  CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
| PESTICIDES REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY OR ANOTHER FEDERAL GOVERNMENT AGENCY (E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME-WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE.  CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  | ` ` '                                       |                  |                        |  |  |
| PROTECTION AGENCY OR ANOTHER FEDERAL GOVERNMENT AGENCY (E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS  |  |   |                  |                        |  |  |
| GOVERNMENT AGENCY ( E.G., THE TREATMENT OF WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME-WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE.  CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  | PESTICIDES REGULATED BY THE ENVIRONMENTAL   |                  |                        |  |  |
| WOOD WITH PRESERVATIVES); (B) EXPOSURES TO PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
| PORTLAND CEMENT; OR (C) WHERE THE EMPLOYER HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS  |  |   |                  |                        |  |  |
| HAS OBJECTIVE DATA DEMONSTRATING THAT A MATERIAL CONTAINING CHROMIUM OR A SPECIFIC PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3   CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
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| PROCESS, OPERATION, OR ACTIVITY INVOLVING CHROMIUM CANNOT RELEASE DUSTS, FUMES, OR MISTS OF CHROMIUM (VI) IN CONCENTRATIONS AT OR ABOVE 0.5 GM/M3 AS AN 8-HOUR TIME- WEIGHTED AVERAGE (TWA) UNDER ANY EXPECTED CONDITIONS OF USE. CHROMIUM (VI) [HEXAVALENT CHROMIUM OR CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL  0.005 MG/M3  CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  | HAS OBJECTIVE DATA DEMONSTRATING THAT A     |                  |                        |  |  |
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| CONDITIONS OF USE.  CHROMIUM (VI) [HEXAVALENT CHROMIUM OR  CR(VI)] MEANS CHROMIUM WITH A VALENCE OF  POSITIVE SIX, IN ANY FORM AND IN ANY  COMPOUND  OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE  EXPOSURE LIMITS FOR  CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
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| CR(VI)] MEANS CHROMIUM WITH A VALENCE OF POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
| POSITIVE SIX, IN ANY FORM AND IN ANY COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
| COMPOUND OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  |   |                  |                        |  |  |
| OSHA SPECIFICALLY REGULATED CARCINOGEN  PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS  |  | POSITIVE SIX, IN ANY FORM AND IN ANY        |                  |                        |  |  |
| PEL 0.005 MG/M3 CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS  |  |   |                  |                        |  |  |
| EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS   |  | OSHA SPECIFICALLY REGULATED CARCINOGEN      |                  |                        |  |  |
| CHEMICAL CONTAMINANTS   |  | PEL   | 0.005 MG/M3      | CALIFORNIA PERMISSIBLE |  |  |
|   |  |   |                  |                        |  |  |
| SEE SECTIONS 1532 2 5206 & 8359   |  |   |                  | CHEMICAL CONTAMINANTS  |  |  |
| SEL SECTIONS 1332.2, 3200 & 6337  |  | SEE SEC                                     | CTIONS 1532.2, 5 | 206 & 8359             |  |  |
| C 0.1 MG/M3 CALIFORNIA PERMISSIBLE  |  | C   | 0.1 MG/M3        | CALIFORNIA PERMISSIBLE |  |  |
| EXPOSURE LIMITS FOR   |  |   |                  | EXPOSURE LIMITS FOR    |  |  |
| CHEMICAL CONTAMINANTS   |  |   |                  | CHEMICAL CONTAMINANTS  |  |  |
| SEE SECTIONS 1532.2, 5206 & 8359  |  | SEE SECTIONS 1532.2, 5206 & 8359            |                  |                        |  |  |

# **EXPOSURE CONTROLS**

APPROPRIATEHANDLE IN ACCORDANCE WITH GOOD INDUSTRIALENGINEERINGHYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE

**CONTROLS** BREAKS AND AT THE END OF WORKDAY.

# PERSONAL PROTECTIVE EQUIPMENT

**EYE/FACE PROTECTION** FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR

EYE PROTECTION TESTED AND APPROVED UNDER

APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH

(US) OR EN 166(EU).

## **SKIN PROTECTION**

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE"S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

**FULL CONTACT** 

MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER
MINIMUM LAYER THICKNESS: 0.11 MM
BREAK THROUGH TIME: 480 MIN
MATERIAL TESTED DERMATRIL (V.C. 740 SI

MATERIAL TESTED: DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

#### **BODY PROTECTION**

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

# RESPIRATORY PROTECTION

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

CONTROL OF ENVIRONMENTAL EXPOSURE PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.
DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Light to dark orange powder ODOUR NO DATA AVAILABLE ODOUR THRESHOLD NO DATA AVAILABLE PH NO DATA AVAILABLE

MELTING 139 - 143 °C

POINT/FREEZING POINT INITIAL BOILING POINT AND BOILING RANGE

FLASH POINT

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY

WATER SOLUBILITY NO DATA AVAILABLE PARTITION COEFFICIENT: NO DATA AVAILABLE

N- OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

**TEMPERATURE** 

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

VISCOSITY NO DATA AVAILABLE EXPLOSIVE PROPERTIES NO DATA AVAILABLE

OXIDIZING PROPERTIES THE SUBSTANCE OR MIXTURE IS CLASSIFIED AS

OXIDIZING WITH THE CATEGORY 2.

OTHER SAFETY INFORMATION

NO DATA AVAILABLE

#### SECTION 10. STABILITY AND REACTIVITY

**REACTIVITY** NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE

CONDITIONS.

POSSIBILITY OF HAZARDOUS REACTIONS NO DATA AVAILABLE

**CONDITIONS TO AVOID** NO DATA AVAILABLE

INCOMPATIBLE MATERIALS

STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION PRODUCTS HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, NITROGEN OXIDES (NOX), CHROMIUM OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA

**AVAILABLE** 

IN THE EVENT OF FIRE: SEE SECTION 5

#### SECTION 11. TOXICOLOGICAL INFORMATION

## INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY NO DATA AVAILABLE

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN** NO DATA AVAILABLE

CORROSION/IRRITATION

**SERIOUS EYE** NO DATA AVAILABLE

DAMAGE/EYE IRRITATION

RESPIRATORY OR SKIN NO I

**SENSITISATION** 

NO DATA AVAILABLE

GERM CELL NO DATA AVAILABLE

MUTAGENICITY

**CARCINOGENICITY** 

POSSIBLE HUMAN CARCINOGEN

IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.

NTP: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED

CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON

OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN** 

**TOXICITY - SINGLE** 

**EXPOSURE** 

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

**TOXICITY - REPEATED** 

**EXPOSURE** 

NO DATA AVAILABLE

ASPIRATION HAZARD

NO DATA AVAILABLE

ADDITIONAL **INFORMATION**  RTECS: NOT AVAILABLE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE

NOT BEEN THOROUGHLY INVESTIGATED.

#### **ECOLOGICAL INFORMATION SECTION 12.**

**TOXICITY** NO DATA AVAILABLE

PERSISTENCE AND **DEGRADABILITY** 

NO DATA AVAILABLE

**BIOACCUMULATIVE** 

**POTENTIAL** 

NO DATA AVAILABLE

**MOBILITY IN SOIL** NO DATA AVAILABLE

RESULTS OF PBT AND VPVB ASSESSMENT

PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT

REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS AN ENVIRONMENTAL HAZARD CANNOT BE

EXCLUDED IN THE EVENT OF UNPROFESSIONAL

HANDLING OR DISPOSAL.

VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING

EFFECTS.

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

WASTE TREATMENT METHODS

**PRODUCT** OBSERVE ALL FEDERAL, STATE, AND LOCAL

ENVIRONMENTAL REGULATIONS. CONTACT A

LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A

LICENSED DISPOSAL COMPANY.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

# **SECTION 14.** TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: OXIDIZING SOLID, N.O.S. (TETRABUTYLAMMONIUM,

SALT WITH CHROMIC ACID (2:1))

UN NUMBER: 1479 CLASS: 5.1 PACKING GROUP: II

REPORTABLE QUANTITY

(RQ):

POISON INHALATION NO

HAZARD:

**IMDG** 

PROPER SHIPPING NAME: OXIDIZING SOLID, N.O.S. (TETRABUTYLAMMONIUM,

SALT WITH CHROMIC ACID (2:1))

UN NUMBER: 1479
CLASS: 5.1
PACKING GROUP: II
EMS-NO: F-A, S-Q
MARINE POLLUTANT: YES

**IATA** 

PROPER SHIPPING NAME: OXIDIZING SOLID, N.O.S. (TETRABUTYLAMMONIUM,

SALT WITH CHROMIC ACID (2:1))

UN NUMBER: 1479 CLASS: 5.1 PACKING GROUP: II

# SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO

THE REPORTING REQUIREMENTS OF SARA TITLE III.

SECTION 302.

SARA 313 COMPONENTS THE FOLLOWING COMPONENTS ARE SUBJECT TO

REPORTING LEVELS ESTABLISHED BY SARA TITLE III,

08-11-1989

SECTION 313:

56660-19-6

CAS-NO. REVISION DATE

Bis(tetrabutylammonium)

dichromate

**SARA 311/312 HAZARDS** REACTIVITY HAZARD, ACUTE HEALTH HAZARD,

CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Bis(tetrabutylammonium) 56660-19-6 08-11-1989

dichromate

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Bis(tetrabutylammonium) 56660-19-6 08-11-1989

dichromate

**CALIFORNIA PROP. 65 COMPONENTS** 

WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF

CALIFORNIA TO CAUSE CANCER.

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM

CAS-NO. REVISION DATE

Bis(tetrabutylammonium) 56660-19-6 06-06-2014

dichromate

## SECTION 16. OTHER INFORMATION

## FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H272 MAY INTENSIFY FIRE; OXIDISER.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H350 MAY CAUSE CANCER.

H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING

EFFECTS.

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL

**HYGINISTS** 

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA) TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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