

Common Name: SODIUM HYPOCHLORITE, 5 - 17%**Manufacturer:** OLIN**SDS Revision Date:** 6/14/2021**SDS Format:** No Format Specified**Item Number(s):** 522P66**Manufacturer Model Number(s):****SDS Table of Contents**

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OLIN (TM)

SAFETY DATA SHEET

SODIUM HYPOCHLORITE, 5 - 17%

VERSION: 5.0

REVISION DATE: 06-14-2021

SDS NUMBER: 10000001223

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OLIN CORPORATION (OCAP) ENCOURAGES AND EXPECTS YOU TO READ AND UNDERSTAND THE ENTIRE (M)SDS, AS THERE IS IMPORTANT INFORMATION THROUGHOUT THE DOCUMENT. WE EXPECT YOU TO FOLLOW THE PRECAUTIONS IDENTIFIED IN THIS DOCUMENT UNLESS YOUR USE CONDITIONS WOULD NECESSITATE OTHER APPROPRIATE METHODS OR ACTIONS.

SECTION 1. IDENTIFICATION

PRODUCT NAME: SODIUM HYPOCHLORITE, 5 - 17%

OTHER MEANS OF IDENTIFICATION: NO DATA AVAILABLE

MANUFACTURER OR SUPPLIER'S DETAILS:

COMPANY NAME OF SUPPLIER: OLIN CORPORATION (OCAP)

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IDENTIFIED USES:
DISINFECTANT.
PAPER BLEACHING AGENT
WATER TREATMENT CHEMICALS
BIOCIDAL PRODUCT
BLEACHING AGENTS, ACTIVATORS AND STABILISERS
TEXTILE BLEACHING AGENT

SECTION 2. HAZARDS IDENTIFICATION



GHS CLASSIFICATION IN ACCORDANCE WITH THE HAZARDOUS PRODUCTS REGULATIONS:

CORROSIVE TO METALS: CATEGORY 1

SKIN CORROSION: CATEGORY 1B

SERIOUS EYE DAMAGE: CATEGORY 1

GHS LABEL ELEMENTS:

HAZARD PICTOGRAMS: CORROSION

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
MAY BE CORROSIVE TO METALS.
CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

PRECAUTIONARY STATEMENTS:

PREVENTION:
P264: WASH SKIN THOROUGHLY AFTER HANDLING.

P280:
WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/
FACE PROTECTION.

RESPONSE:
P301 + P330 + P331:
IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.

P303 + P361 + P353:
IF ON SKIN (OR HAIR):
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER.

P304 + P340 + P310:
IF INHALED:
REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING.
IMMEDIATELY CALL A POISON CENTER/ DOCTOR.

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/ DOCTOR.

P363: WASH CONTAMINATED CLOTHING BEFORE REUSE.

P390: ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE.

STORAGE:
P405: STORE LOCKED UP.

DISPOSAL:
P501: DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

OTHER HAZARDS: NONE KNOWN.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



SUBSTANCE / MIXTURE: SUBSTANCE

SUBSTANCE NAME: SODIUM HYPOCHLORITE, 5 - 17%

CAS-NO.: 7681-52-9

SYNONYMS: NO DATA AVAILABLE

COMPONENTS:

CHEMICAL NAME	CAS-NO.	CONCENTRATION (% W/W)
SODIUM HYPOCHLORITE	7681-52-9	>=7 - <=13 *
WATER	7732-18-5	>=80 - <=100 *
SODIUM HYDROXIDE	1310-73-2	>=1 - <=5 *

*THE ACTUAL CONCENTRATION IS BEING WITHHELD AS A TRADE SECRET.

SECTION 4. FIRST AID MEASURES



IF INHALED:

MOVE PERSON TO FRESH AIR; IF EFFECTS OCCUR, CONSULT A PHYSICIAN.

IN CASE OF SKIN CONTACT:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING. SEEK MEDICAL ATTENTION IF SYMPTOMS OCCUR OR IRRITATION PERSISTS. WASH CLOTHING BEFORE REUSE.

SUITABLE EMERGENCY SAFETY SHOWER FACILITY SHOULD BE IMMEDIATELY AVAILABLE.

IN CASE OF EYE CONTACT:

WASH EYES WITH PLENTY OF WATER FOR 15 MINUTES AT LEAST. DO NOT FORGET TO REMOVE CONTACT LENSES.

SUITABLE EMERGENCY EYE WASH FACILITY SHOULD BE IMMEDIATELY AVAILABLE.

IF SWALLOWED:

DO NOT INDUCE VOMITING. GIVE ONE CUP (8 OUNCES OR 240 ML) OF WATER OR MILK IF AVAILABLE AND TRANSPORT TO A MEDICAL FACILITY. DO NOT GIVE ANYTHING BY MOUTH UNLESS THE PERSON IS FULLY CONSCIOUS.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

ASIDE FROM THE INFORMATION FOUND UNDER DESCRIPTION OF FIRST AID MEASURES (ABOVE), ANY ADDITIONAL IMPORTANT SYMPTOMS AND EFFECTS ARE DESCRIBED IN SECTION 11: TOXICOLOGY INFORMATION.

PROTECTION OF FIRST-AIDERS:

FIRST AID RESPONDERS SHOULD PAY ATTENTION TO SELF-PROTECTION AND USE THE RECOMMENDED PROTECTIVE CLOTHING (CHEMICAL RESISTANT GLOVES, SPLASH PROTECTION).

IF POTENTIAL FOR EXPOSURE EXISTS REFER TO SECTION 8 FOR SPECIFIC PERSONAL PROTECTIVE EQUIPMENT.

NOTES TO PHYSICIAN:

MAY CAUSE ASTHMA-LIKE (REACTIVE AIRWAYS) SYMPTOMS. BRONCHODILATORS, EXPECTORANTS, ANTITUSSIVES AND CORTICOSTEROIDS MAY BE OF HELP.

MAINTAIN ADEQUATE VENTILATION AND OXYGENATION OF THE PATIENT. CHEMICAL EYE BURNS MAY REQUIRE EXTENDED IRRIGATION. OBTAIN PROMPT CONSULTATION, PREFERABLY FROM AN OPHTHALMOLOGIST.

IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION.

DUE TO IRRITANT PROPERTIES, SWALLOWING MAY RESULT IN BURNS/ULCERATION OF MOUTH, STOMACH AND LOWER GASTROINTESTINAL TRACT WITH SUBSEQUENT STRICTURE. ASPIRATION OF VOMITUS MAY CAUSE LUNG INJURY. SUGGEST ENDOTRACHEAL/ ESOPHAGEAL CONTROL IF LAVAGE IS DONE.

NO SPECIFIC ANTIDOTE.

TREATMENT OF EXPOSURE SHOULD BE DIRECTED AT THE CONTROL OF SYMPTOMS AND THE CLINICAL CONDITION OF THE PATIENT.

REPEATED EXCESSIVE EXPOSURE MAY AGGRAVATE PREEXISTING LUNG DISEASE.

SECTION 5. FIREFIGHTING MEASURES



SUITABLE EXTINGUISHING MEDIA:
IN CASE OF FIRE, USE WATER FOG, FOAM, DRY POWDER, CARBON DIOXIDE.

UNSUITABLE EXTINGUISHING MEDIA:
DO NOT USE WATER JET.
MAY SPREAD FIRE.
DRY CHEMICAL EXTINGUISHING AGENTS MAY REACT WITH PRODUCT; USE WITH CAUTION.

HAZARDOUS COMBUSTION PRODUCTS:
DURING A FIRE, SMOKE MAY CONTAIN THE ORIGINAL MATERIAL IN ADDITION TO
COMBUSTION PRODUCTS OF VARYING COMPOSITION WHICH MAY BE TOXIC AND/OR
IRRITATING.

FURTHER INFORMATION:
FOR SAFETY REASONS IN CASE OF FIRE, CONTAINERS SHOULD BE STORED SEPARATELY
IN CLOSED CONTAINMENTS.

DO NOT BREATHE FUMES.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:
WEAR FULL PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING APPARATUS.

SECTION 6. ACCIDENTAL RELEASE MEASURES



PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

EVACUATE AREA.

ONLY TRAINED AND PROPERLY PROTECTED PERSONNEL MUST BE INVOLVED IN CLEAN-UP
OPERATIONS.

WEAR SUITABLE PROTECTIVE EQUIPMENT.

KEEP UPWIND OF SPILL.

AVOID BREATHING VAPOR.

VENTILATE AREA OF LEAK OR SPILL.

AVOID ALL CONTACT.

KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK.

WEAR SUITABLE PROTECTIVE CLOTHING.

USE APPROPRIATE SAFETY EQUIPMENT. FOR ADDITIONAL INFORMATION, REFER TO
SECTION 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

ENVIRONMENTAL PRECAUTIONS:

PREVENT FROM ENTERING INTO SOIL, DITCHES, SEWERS, WATERWAYS AND/OR
GROUNDWATER. SEE SECTION 12, ECOLOGICAL INFORMATION.

DO NOT DISCHARGE DIRECTLY TO A WATER SOURCE.

SEE SECTION 13, DISPOSAL CONSIDERATIONS, FOR ADDITIONAL INFORMATION.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

CONTAIN SPILLED MATERIAL IF POSSIBLE.

ABSORB WITH MATERIALS SUCH AS:

VERMICULITE.

COVER WITH ABSORBENT OR CONTAIN. COLLECT AND DISPOSE.

DIKE AND TRANSFER TO SUITABLE AND PROPERLY LABELED CONTAINERS.

THIS MATERIAL IS CORROSIVE. SEE SECTION 8, EXPOSURE CONTROLS/PERSONAL
PROTECTION, PRIOR TO HANDLING.

SOAK UP WITH INERT ABSORBENT MATERIAL (E.G. SAND, SILICA GEL, POLYPROPYLENE
ABSORBENT).

SECTION 7. HANDLING AND STORAGE



ADVICE ON SAFE HANDLING:
KEEP CONTAINER CLOSED.
DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
AVOID PROLONGED CONTACT WITH EYES, SKIN AND CLOTHING.
WEAR PERSONAL PROTECTIVE EQUIPMENT.
USE WITH ADEQUATE VENTILATION.
PROTECT FROM DIRECT EXPOSURE TO SUNLIGHT.
USE GOOD GENERAL INDUSTRIAL HYGIENE PRACTICES FOR HANDLING.
WASH THOROUGHLY AFTER HANDLING.

CONDITIONS FOR SAFE STORAGE:

KEEP CONTAINER TIGHTLY CLOSED.

STORE AWAY FROM INCOMPATIBLE MATERIALS. SEE STABILITY AND REACTIVITY SECTION.

STORE UNDER COVER IN A DRY, CLEAN, COOL, WELL VENTILATED PLACE AWAY FROM SUNLIGHT.

STORE AWAY FROM OXIDIZING MATERIALS.

STORE IN ORIGINAL VENTED CONTAINER.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION



COMPONENTS WITH WORKPLACE CONTROL PARAMETERS:

COMPONENTS	CAS-NO.	VALUE TYPE (FORM OF EXPOSURE)	CONTROL PARAMETERS / PERMISSIBLE CONCENTRATION	BASIS
SODIUM HYDROXIDE	1310-73-2	(C)	2 MG/M3	CA AB OEL
		C	2 MG/M3	CA BC OEL
		C	2 MG/M3	CA QC OEL
		C	2 MG/M3	ACGIH

ENGINEERING MEASURES:

USE LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO MAINTAIN AIRBORNE LEVELS BELOW EXPOSURE LIMIT REQUIREMENTS OR GUIDELINES. IF THERE ARE NO APPLICABLE EXPOSURE LIMIT REQUIREMENTS OR GUIDELINES, GENERAL VENTILATION SHOULD BE SUFFICIENT FOR MOST OPERATIONS.

LOCAL EXHAUST VENTILATION MAY BE NECESSARY FOR SOME OPERATIONS.

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION:

RESPIRATORY PROTECTION SHOULD BE WORN WHEN THERE IS A POTENTIAL TO EXCEED THE EXPOSURE LIMIT REQUIREMENTS OR GUIDELINES. IF THERE ARE NO APPLICABLE EXPOSURE LIMIT REQUIREMENTS OR GUIDELINES, WEAR RESPIRATORY PROTECTION WHEN ADVERSE EFFECTS, SUCH AS RESPIRATORY IRRITATION OR DISCOMFORT HAVE BEEN EXPERIENCED, OR WHERE INDICATED BY YOUR RISK ASSESSMENT PROCESS.

FOR MOST CONDITIONS NO RESPIRATORY PROTECTION SHOULD BE NEEDED; HOWEVER, IF DISCOMFORT IS EXPERIENCED, USE AN APPROVED AIR-PURIFYING RESPIRATOR.

FILTER TYPE:

THE FOLLOWING SHOULD BE EFFECTIVE TYPES OF AIR-PURIFYING RESPIRATORS:
PARTICULATE FILTER.

HAND PROTECTION:

REMARKS:

USE GLOVES CHEMICALLY RESISTANT TO THIS MATERIAL. EXAMPLES OF PREFERRED GLOVE BARRIER MATERIALS INCLUDE:
NATURAL RUBBER ("LATEX"). NEOPRENE. NITRILE/BUTADIENE RUBBER ("NITRILE" OR "NBR"). POLYETHYLENE. ETHYL VINYL ALCOHOL LAMINATE ("EVAL"). POLYVINYL CHLORIDE ("PVC" OR "VINYL"). AVOID GLOVES MADE OF:
POLYVINYL ALCOHOL ("PVA").

NOTICE:

THE SELECTION OF A SPECIFIC GLOVE FOR A PARTICULAR APPLICATION AND DURATION OF USE IN A WORKPLACE SHOULD ALSO TAKE INTO ACCOUNT ALL RELEVANT WORKPLACE FACTORS SUCH AS, BUT NOT LIMITED TO:
OTHER CHEMICALS WHICH MAY BE HANDLED, PHYSICAL REQUIREMENTS (CUT/PUNCTURE

PROTECTION, DEXTERITY, THERMAL PROTECTION), POTENTIAL BODY REACTIONS TO GLOVE MATERIALS, AS WELL AS THE INSTRUCTIONS/SPECIFICATIONS PROVIDED BY THE GLOVE SUPPLIER.

EYE PROTECTION: USE CHEMICAL GOGGLES.

SKIN AND BODY PROTECTION:

USE PROTECTIVE CLOTHING CHEMICALLY RESISTANT TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS FACE SHIELD, BOOTS, APRON, OR FULL BODY SUIT WILL DEPEND ON THE TASK.

REPORTS INDICATE THAT SODIUM HYPOCHLORITE CAN REACT WITH VARIOUS FABRICS USUALLY INCREASING WITH CONCENTRATION. REACTIONS VARY SIGNIFICANTLY DEPENDING ON STRENGTH OF CHEMICAL, MATERIAL, FABRIC TREATMENT AND COLOR OF DYES. FIRE RESISTANT CLOTHING TREATED COTTON HAS A STRONGER RESPONSE THAN PLAIN COTTON.

POLY BLEND FABRICS AND META ARAMID FABRIC HAVE A WEAKER RESPONSE THAN NATURAL FIBERS. CONTACT THE PERSONAL PROTECTIVE EQUIPMENT MANUFACTURER FOR SPECIFIC INFORMATION ABOUT THEIR PRODUCTS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES



APPEARANCE: LIQUID

COLOUR: NO DATA AVAILABLE

ODOUR: PUNGENT

ODOUR THRESHOLD: NO DATA AVAILABLE

PH: 12 - 14 (25 DEG. C)

FREEZING POINT: -20 DEG. C

METHOD: LITERATURE

MELTING POINT/RANGE: -20 DEG. C

METHOD: LITERATURE

POUR POINT: NO DATA AVAILABLE

SOFTENING POINT: NO DATA AVAILABLE

BOILING POINT/BOILING RANGE: NO DATA AVAILABLE

FLASH POINT: NOT APPLICABLE

EVAPORATION RATE: NO DATA AVAILABLE

FLAMMABILITY (SOLID, GAS): NOT APPLICABLE

SELF-IGNITION: THE SUBSTANCE OR MIXTURE IS NOT CLASSIFIED AS PYROPHORIC.

UPPER EXPLOSION LIMIT / UPPER FLAMMABILITY LIMIT: NOT APPLICABLE

LOWER EXPLOSION LIMIT / LOWER FLAMMABILITY LIMIT: NOT APPLICABLE

VAPOUR PRESSURE: 12 MMHg

RELATIVE VAPOUR DENSITY: NOT AVAILABLE

RELATIVE DENSITY: 1.082 - 1.275 (20 DEG. C)

SOLUBILITY (IES):

WATER SOLUBILITY: COMPLETELY MISCIBLE

PARTITION COEFFICIENT N-OCTANOL/WATER: NO DATA AVAILABLE.

AUTO-IGNITION TEMPERATURE: NOT APPLICABLE

DECOMPOSITION TEMPERATURE: NO DATA AVAILABLE

VISCOSITY:

VISCOSITY, DYNAMIC: NO DATA AVAILABLE

VISCOSITY, KINEMATIC: NO DATA AVAILABLE

EXPLOSIVE PROPERTIES: NOT APPLICABLE

OXIDIZING PROPERTIES: NOT APPLICABLE

MOLECULAR WEIGHT: 74.5 G/MOL

METAL CORROSION RATE: CORROSIVE TO METALS

NOTE:

THESE ARE THE REFERENCE POINTS FOR THESE PHYSICAL PROPERTIES LISTED ABOVE, UNLESS OTHERWISE NOTED IN THEIR RESPECTIVE PHYSICAL PROPERTY VALUE INFORMATION:

BOILING POINT AT 760 MMHG; EVAPORATION RATE BUTYL ACETATE = 1;
RELATIVE VAPOR DENSITY AIR = 1; AND RELATIVE DENSITY WATER = 1.

NOTE:

THE PHYSICAL DATA PRESENTED ABOVE ARE TYPICAL VALUES AND SHOULD NOT BE CONSTRUED AS A SPECIFICATION.

SECTION 10. STABILITY AND REACTIVITY



REACTIVITY: NO DATA AVAILABLE

CHEMICAL STABILITY:

STABLE UNDER RECOMMENDED STORAGE CONDITIONS. SEE STORAGE, SECTION 7.

POSSIBILITY OF HAZARDOUS REACTIONS:

POLYMERIZATION WILL NOT OCCUR.

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

CONDITIONS TO AVOID:

CONTACT WITH INCOMPATIBLE MATERIALS

AVOID DIRECT SUNLIGHT OR ULTRAVIOLET SOURCES.

EXCESSIVE HEAT.

CONTACT BETWEEN ACIDS AND CHLORATES, A COMPONENT OF THIS PRODUCT MIXTURE, CAN CAUSE THE GENERATION OF CHLORINE GAS.

HAZARDOUS DECOMPOSITION PRODUCTS: OXYGEN.

SECTION 11. TOXICOLOGICAL INFORMATION



INFORMATION ON LIKELY ROUTES OF EXPOSURE:

EYE CONTACT

SKIN CONTACT

INHALATION

INGESTION

ACUTE TOXICITY:

SWALLOWING MAY RESULT IN BURNS OF THE MOUTH, THROAT, AND GASTROINTESTINAL TRACT.

COMPONENTS:

SODIUM HYPOCHLORITE:

ACUTE ORAL TOXICITY:

LD50 (RAT): 805 MG/KG

METHOD: ESTIMATED.

ACUTE INHALATION TOXICITY:

LC50 (RAT): >10.5 MG/L

TEST ATMOSPHERE: DUST/MIST

ASSESSMENT: THE SUBSTANCE OR MIXTURE HAS NO ACUTE INHALATION TOXICITY

ACUTE DERMAL TOXICITY:

LD50 (RAT): >1,000 MG/KG

SODIUM HYDROXIDE:

ACUTE ORAL TOXICITY:

LD50 (RABBIT): 336 MG/KG

METHOD: ESTIMATED.

ACUTE INHALATION TOXICITY:

REMARKS: THE LC50 HAS NOT BEEN DETERMINED.

ACUTE DERMAL TOXICITY:

REMARKS: THE DERMAL LD50 HAS NOT BEEN DETERMINED.

SKIN CORROSION/IRRITATION:

CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

COMPONENTS:

SODIUM HYPOCHLORITE:

RESULT: CAUSES BURNS.

REMARKS:

BRIEF CONTACT MAY CAUSE SKIN BURNS. SYMPTOMS MAY INCLUDE PAIN, SEVERE LOCAL REDNESS AND TISSUE DAMAGE.

PROLONGED CONTACT MAY CAUSE SEVERE SKIN BURNS. SYMPTOMS MAY INCLUDE PAIN, SEVERE LOCAL REDNESS, SWELLING, AND TISSUE DAMAGE.

SODIUM HYDROXIDE:

RESULT: CAUSES SEVERE BURNS.

REMARKS:

BRIEF CONTACT MAY CAUSE SEVERE SKIN BURNS. SYMPTOMS MAY INCLUDE PAIN, SEVERE LOCAL REDNESS AND TISSUE DAMAGE.

SERIOUS EYE DAMAGE/EYE IRRITATION: CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

COMPONENTS:

SODIUM HYPOCHLORITE:

RESULT: CORROSIVE

REMARKS:

MAY CAUSE SEVERE IRRITATION WITH CORNEAL INJURY WHICH MAY RESULT IN PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS. CHEMICAL BURNS MAY OCCUR.

SODIUM HYDROXIDE:

RESULT: CORROSIVE

REMARKS:

MAY CAUSE SEVERE IRRITATION WITH CORNEAL INJURY WHICH MAY RESULT IN PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS. CHEMICAL BURNS MAY OCCUR. DUST MAY IRRITATE EYES.

RESPIRATORY OR SKIN SENSITISATION:

SKIN SENSITISATION:

NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

RESPIRATORY SENSITISATION:

NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

COMPONENTS:

SODIUM HYPOCHLORITE:

ASSESSMENT: DOES NOT CAUSE SKIN SENSITISATION.

REMARKS:

DID NOT CAUSE ALLERGIC SKIN REACTIONS WHEN TESTED IN GUINEA PIGS.

REMARKS:

FOR RESPIRATORY SENSITIZATION: NO RELEVANT DATA FOUND.

SODIUM HYDROXIDE:

ASSESSMENT: DOES NOT CAUSE SKIN SENSITISATION.

REMARKS: DID NOT CAUSE ALLERGIC SKIN REACTIONS WHEN TESTED IN HUMANS.

REMARKS:

FOR RESPIRATORY SENSITIZATION: NO RELEVANT DATA FOUND.

GERM CELL MUTAGENICITY:

NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

COMPONENTS:

SODIUM HYPOCHLORITE:

GENOTOXICITY IN VITRO:

REMARKS:

IN VITRO GENETIC TOXICITY STUDIES WERE NEGATIVE IN SOME CASES AND POSITIVE IN OTHER CASES.

ANIMAL GENETIC TOXICITY STUDIES WERE PREDOMINANTLY NEGATIVE.

SODIUM HYDROXIDE:

GENOTOXICITY IN VITRO:

REMARKS: IN VITRO GENETIC TOXICITY STUDIES WERE NEGATIVE.

CARCINOGENICITY: NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

COMPONENTS:

SODIUM HYPOCHLORITE:

REMARKS: DID NOT CAUSE CANCER IN LABORATORY ANIMALS.

SODIUM HYDROXIDE:

REMARKS: NO RELEVANT DATA FOUND.

REPRODUCTIVE TOXICITY: NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

COMPONENTS:

SODIUM HYPOCHLORITE:

EFFECTS ON FERTILITY:

REMARKS:

FOR SIMILAR MATERIAL(S):

IN ANIMAL STUDIES, DID NOT INTERFERE WITH REPRODUCTION.

IN ANIMAL STUDIES, DID NOT INTERFERE WITH FERTILITY.

EFFECTS ON FOETAL DEVELOPMENT:

REMARKS:

DID NOT CAUSE BIRTH DEFECTS OR ANY OTHER FETAL EFFECTS IN LABORATORY ANIMALS.

SODIUM HYDROXIDE:

EFFECTS ON FERTILITY:

REMARKS: NO RELEVANT DATA FOUND.

EFFECTS ON FOETAL DEVELOPMENT:

REMARKS: NO RELEVANT DATA FOUND.

STOT - SINGLE EXPOSURE: NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

COMPONENTS:

SODIUM HYPOCHLORITE:

ASSESSMENT:

MATERIAL IS CORROSIVE. MATERIAL IS NOT CLASSIFIED AS A RESPIRATORY IRRITANT; HOWEVER, UPPER RESPIRATORY TRACT IRRITATION OR CORROSIVITY MAY BE EXPECTED.

SODIUM HYDROXIDE:

ASSESSMENT:

AVAILABLE DATA ARE INADEQUATE TO DETERMINE SINGLE EXPOSURE SPECIFIC TARGET ORGAN TOXICITY.

STOT - REPEATED EXPOSURE: NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

REPEATED DOSE TOXICITY:

COMPONENTS:

SODIUM HYPOCHLORITE:

REMARKS:

REPEATED EXPOSURES TO DUSTS OF THIS MATERIAL ARE NOT ANTICIPATED TO RESULT IN SYSTEMIC TOXICITY OR PERMANENT LUNG INJURY; HOWEVER, EXCESSIVE EXPOSURES MAY CAUSE LESS SEVERE RESPIRATORY EFFECTS.

SODIUM HYDROXIDE:

REMARKS:

BASED ON AVAILABLE DATA, REPEATED EXPOSURES ARE NOT ANTICIPATED TO CAUSE ADDITIONAL SIGNIFICANT ADVERSE EFFECTS.

ASPIRATION TOXICITY: NOT CLASSIFIED BASED ON AVAILABLE INFORMATION.

COMPONENTS:

SODIUM HYPOCHLORITE:

ASPIRATION INTO THE LUNGS MAY OCCUR DURING INGESTION OR VOMITING, CAUSING TISSUE DAMAGE OR LUNG INJURY.

SODIUM HYDROXIDE:

ASPIRATION INTO THE LUNGS MAY OCCUR DURING INGESTION OR VOMITING, CAUSING TISSUE DAMAGE OR LUNG INJURY.

SECTION 12. ECOLOGICAL INFORMATION



ECOTOXICITY:

COMPONENTS:

SODIUM HYPOCHLORITE:

TOXICITY TO FISH:

REMARKS:

MATERIAL IS VERY HIGHLY TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50/EC50 <0.1 MG/L IN THE MOST SENSITIVE SPECIES).

LC50 (PIMEPHALES PROMELAS (FATHEAD MINNOW)): 0.22 - 0.62 MG/L

EXPOSURE TIME: 96 H

METHOD: METHOD NOT SPECIFIED.

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES:

EC50 (DAPHNIA MAGNA (WATER FLEA)): 0.035 MG/L

EXPOSURE TIME: 48 H

TEST TYPE: FLOW-THROUGH TEST

METHOD: OECD TEST GUIDELINE 202

M-FACTOR (ACUTE AQUATIC TOXICITY): 10

TOXICITY TO FISH (CHRONIC TOXICITY):

NOEC (MENIDIA PENINSULAE (TIDEWATER SILVERSIDE)): 0.04 MG/L

EXPOSURE TIME: 28 D

TEST TYPE: FLOW-THROUGH TEST

METHOD: OTHER GUIDELINES

M-FACTOR (CHRONIC AQUATIC TOXICITY): 1

TOXICITY TO MICROORGANISMS:

EC50 (ACTIVATED SLUDGE): 28.7 MG/L

SODIUM HYDROXIDE:

TOXICITY TO FISH:

REMARKS:

MAY INCREASE PH OF AQUATIC SYSTEMS TO >PH 10 WHICH MAY BE TOXIC TO AQUATIC ORGANISMS.

PERSISTENCE AND DEGRADABILITY:

COMPONENTS:

SODIUM HYPOCHLORITE:

BIODEGRADABILITY:

REMARKS: BIODEGRADABILITY IS NOT APPLICABLE TO INORGANIC SUBSTANCES.

SODIUM HYDROXIDE:

BIODEGRADABILITY:

REMARKS: BIODEGRADABILITY IS NOT APPLICABLE TO INORGANIC SUBSTANCES.

BIOACCUMULATIVE POTENTIAL:

COMPONENTS:

SODIUM HYPOCHLORITE:

PARTITION COEFFICIENT N-OCTANOL/WATER:

REMARKS: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).
PARTITIONING FROM WATER TO N-OCTANOL IS NOT APPLICABLE.

SODIUM HYDROXIDE:

PARTITION COEFFICIENT N-OCTANOL/WATER:

REMARKS:

NO BIOCONCENTRATION IS EXPECTED BECAUSE OF THE RELATIVELY HIGH WATER SOLUBILITY.

MOBILITY IN SOIL:

COMPONENTS:

SODIUM HYPOCHLORITE:

DISTRIBUTION AMONG ENVIRONMENTAL COMPARTMENTS:

REMARKS: NO RELEVANT DATA FOUND.

SODIUM HYDROXIDE:

DISTRIBUTION AMONG ENVIRONMENTAL COMPARTMENTS:

KOC: 14

METHOD: ESTIMATED.

REMARKS:

POTENTIAL FOR MOBILITY IN SOIL IS VERY HIGH (KOC BETWEEN 0 AND 50).

OTHER ADVERSE EFFECTS:

COMPONENTS:

SODIUM HYPOCHLORITE:

RESULTS OF PBT AND VPVB ASSESSMENT:

THIS SUBSTANCE HAS NOT BEEN ASSESSED FOR PERSISTENCE, BIOACCUMULATION AND TOXICITY (PBT).

SODIUM HYDROXIDE:

RESULTS OF PBT AND VPVB ASSESSMENT:

THIS SUBSTANCE IS NOT CONSIDERED TO BE PERSISTENT, BIOACCUMULATING AND TOXIC (PBT). THIS SUBSTANCE IS NOT CONSIDERED TO BE VERY PERSISTENT AND VERY BIOACCUMULATING (VPVB).

SECTION 13. DISPOSAL CONSIDERATIONS



DISPOSAL METHODS:

WASTE FROM RESIDUES:

AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION:
COMPOSITION INFORMATION.

ALL DISPOSAL PRACTICES MUST BE IN COMPLIANCE WITH ALL FEDERAL, STATE/ PROVINCIAL AND LOCAL LAWS AND REGULATIONS.

REGULATIONS MAY VARY IN DIFFERENT LOCATIONS.

WASTE CHARACTERIZATIONS AND COMPLIANCE WITH APPLICABLE LAWS ARE THE RESPONSIBILITY SOLELY OF THE WASTE GENERATOR.

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

SECTION 14. TRANSPORT INFORMATION



INTERNATIONAL REGULATIONS:

UNRTDG:

UN NUMBER: UN 1791
PROPER SHIPPING NAME: HYPOCHLORITE SOLUTION
CLASS: 8
PACKING GROUP: II
LABELS: 8

IATA-DGR:

UN/ID NO. : UN 1791
PROPER SHIPPING NAME: HYPOCHLORITE SOLUTION
CLASS: 8
PACKING GROUP: II
LABELS: CORROSIVE
PACKING INSTRUCTION (CARGO AIRCRAFT): 855
PACKING INSTRUCTION (PASSENGER AIRCRAFT): 851

IMDG-CODE:

UN NUMBER: UN 1791
PROPER SHIPPING NAME: HYPOCHLORITE SOLUTION (SODIUM HYPOCHLORITE)
CLASS: 8
PACKING GROUP: II
LABELS: 8
EMS CODE: F-A, S-B
MARINE POLLUTANT: YES
REMARKS: STOWAGE CATEGORY BHYPOCHLORITES

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:
NOT APPLICABLE FOR PRODUCT AS SUPPLIED.

NATIONAL REGULATIONS:

TDG:

UN NUMBER: UN 1791
PROPER SHIPPING NAME: HYPOCHLORITE SOLUTION
CLASS: 8
PACKING GROUP: II
LABELS: 8
ERG CODE: 154
MARINE POLLUTANT: YES (SODIUM HYPOCHLORITE)

SPECIAL PRECAUTIONS FOR USER:

THE TRANSPORT CLASSIFICATION(S) PROVIDED HEREIN ARE FOR INFORMATIONAL PURPOSES ONLY, AND SOLELY BASED UPON THE PROPERTIES OF THE UNPACKAGED MATERIAL AS IT IS DESCRIBED WITHIN THIS SAFETY DATA SHEET. TRANSPORTATION CLASSIFICATIONS MAY VARY BY MODE OF TRANSPORTATION, PACKAGE SIZES, AND VARIATIONS IN REGIONAL OR COUNTRY REGULATIONS.

SECTION 15. REGULATORY INFORMATION



INTERNATIONAL REGULATIONS:

MONTREAL PROTOCOL: NOT APPLICABLE
ROTTERDAM CONVENTION (PRIOR INFORMED CONSENT): NOT APPLICABLE
STOCKHOLM CONVENTION (PERSISTENT ORGANIC POLLUTANTS): NOT APPLICABLE

THE COMPONENTS OF THIS PRODUCT ARE REPORTED IN THE FOLLOWING INVENTORIES:

TCSI:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

TSCA:

ALL SUBSTANCES LISTED AS ACTIVE ON THE TSCA INVENTORY OR ARE NOT REQUIRED TO BE LISTED.

AICS:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

DSL:

ALL SUBSTANCES CONTAINED IN THIS PRODUCT ARE LISTED ON THE CANADIAN DOMESTIC SUBSTANCES LIST (DSL) OR ARE NOT REQUIRED TO BE LISTED.

ENCS:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

ISHL:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

KECI:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

PICCS:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

IECSC:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

NZIOC:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

CH INV:

ALL INTENTIONAL COMPONENTS ARE LISTED ON THE INVENTORY, ARE EXEMPT, OR ARE SUPPLIER CERTIFIED.

CANADIAN LISTS:

NO SUBSTANCES ARE SUBJECT TO A SIGNIFICANT NEW ACTIVITY NOTIFICATION.

SECTION 16. OTHER INFORMATION



FURTHER INFORMATION:

NFPA 704:

HEALTH	3
FLAMMABILITY	0
INSTABILITY	0
SPECIAL HAZARD	

FULL TEXT OF OTHER ABBREVIATIONS:

ACGIH: USA. ACGIH THRESHOLD LIMIT VALUES (TLV)

CA AB OEL:

CANADA. ALBERTA, OCCUPATIONAL HEALTH AND SAFETY CODE (TABLE 2: OEL)

CA BC OEL: CANADA. BRITISH COLUMBIA OEL

CA QC OEL:

QUEBEC. REGULATION RESPECTING OCCUPATIONAL HEALTH AND SAFETY, SCHEDULE 1, PART 1: PERMISSIBLE EXPOSURE VALUES FOR AIRBORNE CONTAMINANTS

ACGIH / C: CEILING LIMIT

CA AB OEL / (C): CEILING OCCUPATIONAL EXPOSURE LIMIT

CA BC OEL / C: CEILING LIMIT

CA QC OEL / C: CEILING

AICS: AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES

ANTT: NATIONAL AGENCY FOR TRANSPORT BY LAND OF BRAZIL

ASTM: AMERICAN SOCIETY FOR THE TESTING OF MATERIALS; BW - BODY WEIGHT

CMR: CARCINOGEN, MUTAGEN OR REPRODUCTIVE TOXICANT

DIN: STANDARD OF THE GERMAN INSTITUTE FOR STANDARDISATION

DSL: DOMESTIC SUBSTANCES LIST (CANADA)

ECX: CONCENTRATION ASSOCIATED WITH X% RESPONSE

ELX: LOADING RATE ASSOCIATED WITH X% RESPONSE

EMS:

EMERGENCY SCHEDULE; ENCS - EXISTING AND NEW CHEMICAL SUBSTANCES (JAPAN)

ERCX: CONCENTRATION ASSOCIATED WITH X% GROWTH RATE RESPONSE

ERG: EMERGENCY RESPONSE GUIDE

GHS: GLOBALLY HARMONIZED SYSTEM

GLP: GOOD LABORATORY PRACTICE

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IATA: INTERNATIONAL AIR TRANSPORT ASSOCIATION

IBC:
INTERNATIONAL CODE FOR THE CONSTRUCTION AND EQUIPMENT OF SHIPS CARRYING
DANGEROUS CHEMICALS IN BULK

IC50: HALF MAXIMAL INHIBITORY CON-CENTRATION

ICAO: INTERNATIONAL CIVIL AVIATION ORGANIZATION

IECSC: INVENTORY OF EXISTING CHEMICAL SUBSTANCES IN CHINA

IMDG: INTERNATIONAL MARITIME DANGEROUS GOODS

IMO: INTERNATIONAL MARITIME ORGANIZATION

ISHL: INDUSTRIAL SAFETY AND HEALTH LAW (JAPAN)

ISO: INTERNATIONAL ORGANISATION FOR STANDARDIZATION

KECI: KOREA EXISTING CHEMICALS INVENTORY

LC50: LETHAL CON-CENTRATION TO 50 % OF A TEST POPULATION

LD50: LETHAL DOSE TO 50% OF A TEST POPULATION (MEDIAN LETHAL DOSE)

MARPOL:
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS

N.O.S.: NOT OTHERWISE SPECIFIED

NCH: CHILEAN NORM

NO(A)EC: NO OBSERVED (ADVERSE) EFFECT CONCENTRATION

NO(A)EL: NO OBSERVED (ADVERSE) EFFECT LEVEL

NOELR: NO OBSERVABLE EFFECT LOADING RATE

NOM: OFFICIAL MEXICAN NORM

NTP: NATIONAL TOXICOLOGY PROGRAM

NZIOC: NEW ZEALAND INVENTORY OF CHEMICALS

OECD: ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

OPPTS: OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

PBT: PERSISTENT, BIOACCUMULATIVE AND TOXIC SUBSTANCE

PICCS: PHILIPPINES INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES

(Q)SAR: (QUANTITATIVE) STRUCTURE ACTIVITY RELATIONSHIP

REACH:
REGULATION (EC) NO 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
CONCERNING THE REGISTRATION, EVALUATION, AUTHORISATION AND RESTRICTION OF
CHEMICALS

SADT: SELF-ACCELERATING DECOMPOSITION TEMPERATURE

SDS: SAFETY DATA SHEET

TCSI: TAIWAN CHEMICAL SUBSTANCE INVENTORY

TDG: TRANSPORTATION OF DANGEROUS GOODS

TSCA: TOXIC SUBSTANCES CONTROL ACT (UNITED STATES)

UN: UNITED NATIONS

UNRTDG: UNITED NATIONS RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

VPVB: VERY PERSISTENT AND VERY BIOACCUMULATIVE

WHMIS: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

REVISION DATE: 06-14-2021

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CA / EN