

SECTION 1 - PRODUCT IDENTIFICATION

PRODUCT NAME: FORMULA 305
 PRODUCT USE: BIOCIDES
 RESTRICTIONS ON USE: Refer to label, available technical information, and other appropriate sections of this SDS.
 UN NUMBER: UN1791
 PROPER SHIPPING NAME: UN1791, HYPOCHLORITE SOLUTION, 8, PGIII
 MANUFACTURER'S NAME: Garrett-Callahan Company
 ADDRESS: 50 Ingold Road, Burlingame, CA 94010-2206
 EMERGENCY PHONE: **North America: CHEMTREC: 1-800-424-9300**
Outside North America: +1-703-527-3887
 BUSINESS PHONE: Product Information: 650-697-5811
 SDS NUMBER: SD3305
 DATE OF REVISION: 1/24/2018

SECTION 2 - HAZARDS IDENTIFICATION

SIGNAL WORD: DANGER

HAZARD STATEMENT:

H312: Harmful in contact with skin. 4
 H314: Causes severe skin burns and eye damage.
 H318: Causes serious eye damage. 1
 H410: Very toxic to aquatic life with long lasting effects. 1

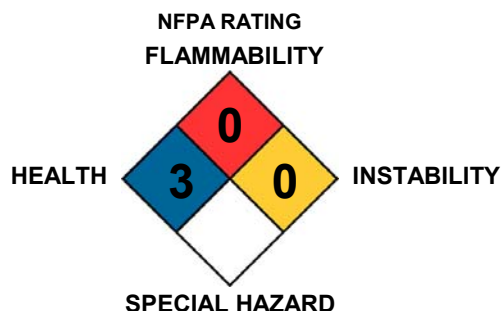


PRECAUTIONARY STATEMENTS: (PREVENTION)

P101: If medical advice is needed, have product container or label at hand.
 P102: Keep out of reach of children.
 P103: Read label before use.
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.
 P264: Wash all exposed skin/hair thoroughly after handling.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE)	3	Hazard Scale 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe *=Chronic hazard
FLAMMABILITY HAZARD (RED)	0	
PHYSICAL HAZARD (YELLOW)	0	
PERSONAL PROTECTION		



SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS#</u>	<u>EC#</u>	<u>ICSC#</u>	<u>WT %</u>
SODIUM HYPOCHLORITE	7681-52-9	231-668-3	0482	12-15
SODIUM HYDROXIDE	1310-73-2	11-002-00-6	0360	2-3

SECTION 4 - FIRST AID MEASURES

Exposed individuals must be taken for medical attention if any adverse effect occurs. Take a copy of this SDS to the health professional with the individual. P310: Immediately call a POISON CENTER or doctor/physician.

DANGER: Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life with long lasting effects. Also refer to Section 11 for symptoms, effects, and likely routes of exposure for this product.

TARGET ORGANS:

ACUTE: irritation of skin, eyes, respiratory and gastrointestinal systems.

CHRONIC: irritation of skin, eyes, respiratory and gastrointestinal systems.

SKIN EXPOSURE: P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. P302+P352: IF ON SKIN: Wash with soap and water. Rinse skin with water/shower. Minimum flushing time is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate the eyes. P362+P364: Take off contaminated clothing and wash before reuse. P310: Immediately call a POISON CENTER or doctor/physician.

EYE EXPOSURE: P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Use sufficient force to open the eyelids. Have the exposed individual "roll" their eyes. Minimum flushing time is for 15 minutes. P310: Immediately call a POISON CENTER or doctor/physician.

INHALATION: P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310: Immediately call a POISON CENTER or doctor/physician.

INGESTION: P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P310: Immediately call a POISON CENTER or doctor/physician. Never induce vomiting or give diluents (milk or water) by mouth to someone who is unconscious, having convulsions, or unable to swallow.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin and respiratory disorders, as well as conditions involving the "Target Organs" may be aggravated by prolonged exposures to this product. Exposed individual must seek immediate medical attention if any adverse effect occurs.

NOTES TO PHYSICIAN: Treat symptoms as demonstrated by signs and distress in the patient.

SECTION 5 - FIRE FIGHTING MEASURES

SUITABLE (AND UNSUITABLE) EXTINGUISHING MATERIALS:

Product is non-flammable. Do not use water jet as an extinguisher, as this will spread the fire. Use powder, foam, or carbon dioxide to extinguish.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

During fire, harmful gases hazardous to health may be formed.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:

Firefighters should wear fully protective clothing (chemical impermeable, fully encapsulated suit) and positive pressure self-contained breathing apparatus. Do not release run off from fire control methods to sewer or waterways. Move container from fire area if it can be done without risk.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, ENVIRONMENTAL PRECAUTIONS AND EMERGENCY PROCEDURES.

WARNING: Any container expansion or rounding indicates pressure build-up. Use extreme caution. When opening, release pressure slowly through opening.

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by appropriately trained personnel using pre-planned procedures. Proper protective equipment should be used, refer to Section 8 - exposure controls. P391: Collect spillage. P273: Avoid release to the environment.

Small Spill: Mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Restrict access to the area. Provide adequate protective equipment and ventilation. Stop leak if without risk. Remove chemicals which can react with the spilled material. Add dry inert material to contain and absorb spilled material. Prevent entry into surface waters, sewers, basements or confined areas, dike if needed. Ensure that exposure to product is not at a concentration exceeding regulatory limits. Decontaminate the area thoroughly. Decontaminate all response equipment with soapy water before returning to service. Place all spill residue in a suitable container and seal.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Keep out of reach of children. All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. As with all chemicals, avoid getting this product ON YOU or IN YOU. Avoid direct or prolonged contact with skin or eyes. Do not ingest. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors, dusts or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately. Use only as directed. Refer to Section 8 for exposure controls. P273: Avoid release to the environment.

CONDITIONS FOR SAFE STORAGE: Containers of this product must be properly labeled. Storage areas of this product should be clearly identified, well-illuminated, clear of obstruction and accessible only to trained and authorized personnel. Store containers in a clean, cool, well ventilated, dry location, away from direct sunlight, away from incompatible materials at temperatures between 50°F (10°C) - 100°F (37°C). Keep container tightly closed when not in use. P405: Store locked up. Do not ingest. Do not breathe vapor mist. Wash hands after handling. Refer to Section 10 for incompatibilities.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Eyewash/safety shower station is recommended to be available near where this product is used/stored.

EXPOSURE LIMITS/GUIDELINES:

EXPOSURE LIMITS IN AIR

CHEMICAL NAME	CAS#	ACGIH TLV		OSHA PEL	OTHER
		TWA	STEL	TWA	
SODIUM HYPOCHLORITE	7681-52-9	NE	NE	NE	N/A
SODIUM HYDROXIDE	1310-73-2	2 mg/m ³ ceiling	NE	2 mg/m ³ ceiling	NIOSH 2 mg/m ³ ceiling

NE = Not Established

INGESTION: P264: Wash all exposed skin/hair thoroughly after handling. Do not eat, drink or smoke when using this product.

RESPIRATORY PROTECTION: P260: Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. Air-purifying respirators with dust/mist/fume/spray filters are recommended if operations may produce dusts, mists or sprays from this product with concentrations at or above levels posted above.

EYE PROTECTION: P264: Wash all exposed skin/hair thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. Wear chemical safety goggles or safety glasses with side shields. A face shield may also be necessary for splash protection.

SKIN PROTECTION: P264: Wash all exposed skin/hair thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. Use chemically-resistant gloves and skin protection, when handling this product. Use body protection appropriate for task (e.g., lab coat, overalls).

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE and COLOR:	Pale yellow to greenish-yellow liquid	VAPOR PRESSURE, mm Hg @ 20°C:	0.02 hPa estimated
ODOR :	Chlorine-like	VAPOR DENSITY (Air=1):	Not established
ODOR THRESHOLD:	Not established	RELATIVE DENSITY@20°C (water=1):	1.18-1.28
pH:	12-14	SOLUBILITY IN WATER:	Not established
MELTING/FREEZING POINT:	-15°F (-26.11°C)	PARTITION COEFFICIENT(n-octanol/water):	Not established
BOILING POINT:	298.83°F (145.46°C)	AUTOIGNITION TEMPERATURE:	Not applicable
FLASHPOINT:	Not established	DECOMPOSITION TEMPERATURE:	Not established
EVAPORATION RATE (n-BuAc=1):	Not established	VISCOSITY:	Not established
FLAMMABILITY (SOLID/GAS):	Not applicable	VOLATILE ORGANIC COMPOUNDS (%):	None
FLAMMABLE LIMITS (in air by volume, %):	Not applicable		

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY: The product is stable and non-reactive under normal conditions of use, storage and transport.

STABILITY: Material is stable under normal conditions.

POSSIBILITY OF HAZARDOUS

REACTIONS: Hazardous polymerization does not occur.

CONDITIONS TO AVOID: Contact with incompatible materials.

INCOMPATIBLE MATERIALS: Strong acids.

HAZARDOUS DECOMPOSITION

PRODUCTS: No hazardous decomposition products are known.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICOLOGICAL EFFECTS: Acute toxicity: Harmful in contact with skin.

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

Respiratory sensitization: Not a respiratory sensitizer.

LIKELY ROUTES OF EXPOSURE: Skin, eye contact and inhalation.

RELATED SYMPTOMS: Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

DELAYED/IMMEDIATE/CHRONIC EFFECTS FROM SHORT AND

LONG TERM EXPOSURES: Prolonged inhalation may be harmful.

NUMERICAL MEASURES OF

TOXICITY: Not established for this product.

CARCINOGENICITY: None of the components of this product are listed by the NTP, IARC, or regulated by OSHA AS carcinogens.

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ECOTOXICITY:

HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)

Aquatic

Fish, LC50, Chinook salmon (*Oncorhynchus tshawytscha*), 0.038 - 0.065 mg/l , 96 hours

SODIUM HYDROXIDE (NA(OH)) (CAS 1310-73-2)

Aquatic

Crustacea, EC50, Water flea (*Ceriodaphnia dubia*), 34.59-47.13 mg/l, 48 hours

Fish, LC50, Western mosquitofish (*Gambusia affinis*), 125 mg/l, 96 hours

PERSISTENCE AND DEGRADABILITY: No data available for this product.

BIOLOGICAL ACCUMULATION POTENTIAL: No data available for this product.

MOBILITY IN SOIL: No data available for this product.

OTHER ADVERSE EFFECTS (i.e., hazardous to the ozone layer): No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Environmental Hazards:

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, ponds, streams, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL: Thoroughly drain/empty containers and offer for recycling. Refer to Section 8 for exposure controls - personal protection. P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14 - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME

DOT: UN1791, HYPOCHLORITE SOLUTION, 8, PGIII
Emergency Response Guidebook, Guide No.: 154
Passenger Aircraft Qty: 5L
Cargo Aircraft Qty: 60L

IMDG/IMO: UN1791, HYPOCHLORITE SOLUTION, 8, PGIII

IATA/ICAO: UN1791, HYPOCHLORITE SOLUTION, 8, PGIII



ENVIRONMENTAL HAZARDS

(i.e., **MARINE POLLUTANT**): IMDG Regulated Marine Pollutant

TRANSPORT IN BULK (according to annex II marpol 73/78 and the IBC code): Not applicable.

SPECIAL PRECAUTIONS FOR USER: None known.

PRODUCT REQUIRES CORROSIVE LABEL

SECTION 15 - REGULATORY INFORMATION

United States and International Regulations

United States Regulations: U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting as listed below, requirements of Sections 302, 304, and 313 of Title of the Superfund Amendments and Reauthorization Act:

CHEMICAL NAME

SODIUM HYPOCHLORITE	SARA 302 (40 CFR 355, Appendix A) - NO
	SARA 304 (40 CFR Table 302.4) - YES
	SARA 313 (40 CFR 372.65) - NO
SODIUM HYDROXIDE	SARA 302 (40 CFR 355, Appendix A) - NO
	SARA 304 (40 CFR Table 302.4) - YES
	SARA 313 (40 CFR 372.65) - NO

U.S. Regulations

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Sodium Hydroxide (CAS# 1310-73-2) has an RQ of 1,000 lbs (454 kg). Sodium Hypochlorite (CAS# 7681-52-9) has an RQ of 100 lbs (45.4 kg).

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory, or are exempt.

SARA Title 311/312, Hazard Category: Acute Health: YES; Chronic: NO; Fire: NO; Reactive: NO; Sudden Release of Pressure: NO

FIFRA Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER. Corrosive. May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Wear safety glasses or goggles and rubber gloves when handling this product. Do not get in eyes, on skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): No component of this product is on the Proposition 65 list.

International Regulations

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The components of this product are on the DSL or NDSL Inventories or are exempt from listing.

CANADIAN WHMIS CLASSIFICATION: Sodium Hydroxide has WHMIS classification of E (corrosive).

SECTION 16 - OTHER INFORMATION

PREPARED BY: GARRATT CALLAHAN

DATE OF REVISION: 1/24/2018 Supercedes: 3/24/2016

Formula 305 is EPA-registered; with EPA Reg. No. 8540-16. Refer to the approved label for details.

Formula 305 is registered with the NSF to the NSF International Registration Guidelines for Proprietary Substances and Nonfood Compounds for category codes 3D, B1, Q4; with NSF Reg. No. 045973.

Formula 305 is registered with the NSF to the Nationally Recognized Health Effects Standard (ANSI 60) for chemicals which are used to treat drinking water; with NSF DCC# DA03670.



CERTIFIED TO NSF/ANSI 60

Nonfood Compounds
Program Listed (3D, B1, Q4, B2)
NSF Reg. No. DA03670

Disinfection and oxidation
MUL = 670 mg/l as product.

Maximum Use Level : 84 mg/L

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