

SECTION 1 - PRODUCT IDENTIFICATION

PRODUCT NAME:	FORMULA 159
PRODUCT USE:	OXYGEN SCAVENGER
RESTRICTIONS ON USE:	Refer to label, available technical information, and other appropriate sections of this SDS.
UN NUMBER:	NOT REGULATED
PROPER SHIPPING NAME:	NOT REGULATED
MANUFACTURER'S NAME:	Garratt-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:	SD1559
DATE OF REVISION:	4/17/2023

SECTION 2 - HAZARDS IDENTIFICATION

SIGNAL WORD: WARNING

GHS HAZARD STATEMENT:

- H302: Harmful if swallowed. 4
- H315: Causes skin irritation. 2
- H317: May cause an allergic skin reaction. 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.
- P261: Avoid breathing dust/fume/ gas/mist/vapours/spray.
- P264: Wash all exposed skin/hair thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P284: [In case of inadequate ventilation] wear respiratory protection.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

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

NFPA RATING FLAMMABILITY



SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS#</u>	<u>EC#</u>	<u>ICSC#</u>	<u>WT %</u>
SODIUM BISULFITE	7631-90-5	231-548-0	1134	20 - <30
PROPRIETARY INGREDIENTS				15-30

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.

DANGER: Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. 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): Take off immediately all contaminated clothing. Rinse skin with water[or shower]. IF ON SKIN: Wash with water. Minimum rinsing time is for 15 minutes. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. 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 rinsing 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. P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor. P310: Immediately call a POISON CENTER or doctor/physician.

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

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: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Do not use water jet as an extinguisher, as this will spread the fire.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: None known.

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.

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.

Small Spill: Mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. P391: Collect spillage.

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. P391: Collect spillage.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: 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. Refer to Section 8 for exposure controls.

CONDITIONS FOR SAFE STORAGE: All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. 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 cool, dry location, away from direct sunlight, at temperatures between 50°F (10°C) - 100°F (37°C). Keep container tightly closed when not in use. P405: Store locked up. 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#	OTHER		
		TWA ACGIH TLV	STEL	TWA OSHA PEL
SODIUM BISULFITE	7631-90-5	5 mg/m3	NE	NE
PROPRIETARY INGREDIENTS				N/A

NE = Not Established

INGESTION: P264: Wash thoroughly after handling. P270: Do not eat, drink or smoke when using this product.

RESPIRATORY PROTECTION: P260: Do not breathe dust/fume/gas/mist/vapours/spray. 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. P284: [In case of inadequate ventilation] wear respiratory protection.

EYE PROTECTION: P264: Wash all exposed skin/hair thoroughly after handling. A face shield may also be necessary for splash protection. P280: Wear protective gloves/protective clothing/eye protection/face protection.

SKIN PROTECTION: Use chemically-resistant gloves and skin protection, when handling this product. Use body protection appropriate for task (e.g., lab coat, overalls). P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P272: Contaminated work clothing should not be allowed out of the workplace.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE and COLOR:	Clear light yellow/water white	VAPOR PRESSURE, mm Hg @ 20°C:	Not established
ODOR :	Slight	VAPOR DENSITY (Air=1):	Not established
ODOR THRESHOLD:	Not established	RELATIVE DENSITY@20°C (water=1):	1.3 - 1.4
pH:	6.0 - 8.5	SOLUBILITY IN WATER:	Complete
MELTING/FREEZING POINT:	Not established	PARTITION COEFFICIENT(n-octanol/water):	
BOILING POINT:	Not established	AUTOIGNITION TEMPERATURE:	Not established
FLASHPOINT:	Non-flammable	DECOMPOSITION TEMPERATURE:	Not established
EVAPORATION RATE (n-BuAc=1):	Not established	VISCOSITY:	Not established
FLAMMABILITY (SOLID/GAS):		VOLATILE ORGANIC COMPOUNDS (%):	Not established
FLAMMABLE LIMITS (in air by volume, %)	Not established		

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY: Product is not reactive under standard ambient temperature and pressure.

STABILITY: Stable under normal condition of use and storage.

POSSIBILITY OF HAZARDOUS

REACTIONS: Hazardous polymerization does not occur.

CONDITIONS TO AVOID: Contact with incompatible materials.

INCOMPATIBLE MATERIALS: None known.

HAZARDOUS DECOMPOSITION

PRODUCTS: No hazardous decomposition products are known.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICOLOGICAL EFFECTS: Harmful if swallowed. May cause an allergic skin reaction.

LIKELY ROUTES OF EXPOSURE: May cause irritation to the respiratory system. May cause allergy or asthma symptoms or

RELATED SYMPTOMS: breathing difficulties if inhaled. Prolonged inhalation may be harmful.

DELAYED/IMMEDIATE/CHRONIC EFFECTS FROM SHORT AND LONG TERM

EXPOSURES: Harmful if swallowed. May cause an allergic skin reaction.

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: This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SODIUM BISULFITE (CAS 7631-10-5)

AQUATIC

LC 50 Western Mosquitofish (*Gambusia Affinis*) 240 mg/l; 96 hrs; LC 50 Fathead Minnow 949 mg/l; *Ceriodaphnia dubia* 76.8 ppm.

PERSISTANCE 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 data available for this product.

BIOLOGICAL EXPOSURE INDICES: Currently, Biological Exposure Indices (BEIs) have not been determined for the components of this product.

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: NOT REGULATED

IMDG/IMO: NOT REGULATED

IATA/ICAO: NOT REGULATED

ENVIRONMENTAL HAZARDS

(i.e., MARINE POLLUTANT): None known.

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

SPECIAL PRECAUTIONS FOR USER: None known.

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 BISULFITE

SARA 302 (40 CFR 355, Appendix A) - NO

SARA 304 (40 CFR Table 302.4) - YES

SARA 313 (40 CFR 372.65) - NO

PROPRIETARY INGREDIENTS

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 bisulfite (7631-90-5): 5000 lbs (2268 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; Pressure: NO

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

CANADIAN WHMIS CLASSIFICATION: Sodium Bisulfite; 2DB

SECTION 16 - OTHER INFORMATION

PREPARED BY: GARRATT CALLAHAN

DATE OF REVISION: 4/17/2023 Supercedes: 11/11/2021

FORMULA 159 has been certified by the Orthodox Union as Kosher Pareve under the UK ID number of OUV3-A6E0470 when prepared in either the Addison, Illinois or Burlingame, California facilities.

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