

AV-103 Catalyst SP
MATERIAL SAFETY DATA SHEET



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1. PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: AV-103 Catalyst SP
CLASSIFICATION: Catalyst

MANUFACTURER
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2. COMPOSITION/INGREDIENT INFORMATION

Ingredient / CAS Number	Exposure Limits	Concentration
Sodium Persulfate CAS #7775-27-1	OSHA PEL: Not established ACGIH TWA: 0.1 mg/m ³	Trade Secret

3. HAZARDS IDENTIFICATION

HEALTH HAZARDS: Airborne persulfate dust may be irritating to eyes, nose, lungs, throat and skin upon contact.
INHALATION: Exposure to high levels of persulfate dust may cause difficulty in breathing in sensitive persons.
INGESTION: May be harmful if swallowed.

4. FIRST AID MEASURES

EYES: Flush with plenty of water. Get medical attention if irritation occurs and persists.
SKIN: Wash thoroughly with soap and water. Remove all contaminated clothing and wash or clean prior to reuse. If irritation develops, consult a physician.
INHALATION: Remove to fresh air. If breathing is difficult, contact a physician.
INGESTION: Rinse mouth with water. Dilute by giving 1-2 glasses of water. Do NOT induce vomiting. Seek medical attention. Note: Never give anything by mouth to an unconscious or convulsing person.

5. FIRE AND EXPLOSION HAZARDS

FLASH POINT: Non-combustible
FLAMMABLE LIMITS: Non-combustible
AUTOIGNITION TEMPERATURE: Not applicable. No evidence of combustion up to 800°C.
EXTINGUISHING MEDIA: Deluge with water.
FIRE/EXPLOSION HAZARDS: Product is non-combustible. On decomposition releases oxygen which may intensify fire. Presence of water accelerates decomposition. In case of fire or decomposition (fuming/smoking) deluge with plenty of water to control decomposition.
FIRE FIGHTING PROCEDURES: Do not use carbon dioxide or other gas filled fire extinguishers; they will have no effect on decomposing persulfates.
PROTECTIVE EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: Spilled material should be collected and put in approved DOT container and isolated for disposal. Isolated material should be monitored for signs of decomposition (fuming/smoking). If spilled material is wet, dissolve with large quantity of water and dispose as a hazardous waste. All disposals should be carried out according to regulatory agencies procedures.

7. HANDLING AND STORAGE

HANDLING: Use adequate ventilation when transferring product from bags or drums. Wear respiratory protection if ventilation is inadequate or not available. Use eye and skin protection. Use clean plastic or stainless steel scoops only.

STORAGE: Protect from physical damage. Do not store near acids, moisture or heat. Store (unopened) in a cool, clean, dry location away from point sources of heat, e.g. radiant heaters or steam pipes. Use first in, first out storage system. Avoid contamination of opened product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide mechanical general and/or local exhaust ventilation to prevent release of dust into work environment.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear chemical goggles and/or face shield to avoid splashing on face.

SKIN: Wear chemically resistant boots and gloves, and normal work clothes. Thoroughly wash outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

RESPIRATORY: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved full-face piece respirator, half-face piece respirator with splash goggles, or powered, filtered air-supplied hood.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash fountain and quick drench facilities in close proximity to points of potential exposure.

HYGIENE PRACTICES: Wash with soap and water after handling. Remove contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: White odorless crystals

pH: Typically 5.0-7.0 @ 25°C (1% solution)

BOILING POINT: Not applicable

MELTING POINT: Decomposes

OXIDIZING PROPERTIES: Oxidizer

EVAPORATION RATE: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY (air=1): Not applicable

pH: Typically 5.0-7.0 @ 25°C (1% solution)

SOLUBILITY IN WATER: 73% @ 25°C

SPECIFIC GRAVITY (water=-1): 2.6

10. STABILITY AND REACTIVITY

STABILITY: Stable in sealed containers under normal conditions. Becomes unstable in presence of heat, moisture, and/or contamination.

CONDITIONS TO AVOID: Heat, moisture, and contamination.

MATERIALS TO AVOID: Acids, alkalis, halides (fluorides, chlorides, bromides and iodides), combustible materials, most metals and heavy metals, oxidizable materials, other oxidizers, reducing agents, cleaners, and organic or carbon containing compounds. Contact with incompatible materials can result in a material decomposition or other uncontrolled reactions.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxygen that supports combustion and oxides of sulfur.

HAZARDOUS POLYMERIZATION: Will not occur.

PRECAUTIONARY STATEMENT: Use of persulfates in chemical reactions requires appropriate precautions and design consideration for pressure and thermal relief. Decomposing persulfates will evolve large volumes of gas and/or vapor, can accelerate exponentially with heat generation, and create significant and hazardous pressures if contained and not properly controlled or mitigated. Use with alcohols in the presence of water has been demonstrated to generate conditions that require rigorous adherence to process safety methods and standards to prevent escalation to an uncontrolled reaction.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: This material is not listed as a potential carcinogen by OSHA, IARC, and NFP.

ORAL LD50 (rat): 895 mg/kg

DERMAL LD50 (rabbit): >10 g/kg

INHALATION LC50 (rat): 5.1 mg/L

12. ECOLOGICAL INFORMATION

ECOTOXICITY (LC50)

Bluegill Sunfish (96-hr): 771 mg/L

Rainbow Trout (96-hr): 163 mg/L

Daphnia (48-hr): 133 mg/L

Grass Shrimp (96-hr): 519 mg/L

CHEMICAL FATE INFORMATION: Biodegradability does not apply to inorganic substances.

13. DISPOSAL CONSIDERATIONS

Dispose as a hazardous waste in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Sodium Persulfate

HAZARD CLASS: 5.1 (Oxidizer)

UN NUMBER: 1505

PACKING GROUP: III

LABEL: 5.1

PLACARD: 5.1 (Oxidizer)

NMFC (NATIONAL MOTOR FREIGHT CARRIERS)

FREIGHT CLASS: 65

15. REGULATORY INFORMATION**SARA TITLE III****SECTION 302:** Not applicable**SECTION 311:** Fire Hazard, Immediate (Acute) Health Hazard**SECTION 313:** Not listed**CERCLA:** Unlisted**REPORTABLE QUANTITY:** 100 lbs**TSCA REGULATORY:** All components of this product are either on the TSCA Inventory or exempt.**RCRA STATUS:** Hazardous waste, if discarded.**HAZARDOUS WASTE NUMBER:** D001**NFPA (NATIONAL FIRE PROTECTION AGENCY)****HEALTH:** 1**FLAMMABILITY:** 0**REACTIVITY:** 1**SPECIAL:** OX**16. OTHER INFORMATION**

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