

AV-101 Catalyst T+  
**MATERIAL SAFETY DATA SHEET**



Date Issued: 07/09/2009

**1. PRODUCT AND COMPANY INFORMATION**

**PRODUCT NAME:** AV-101 Catalyst T+  
**CLASSIFICATION:** Catalyst

**MANUFACTURER**  
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**EMERGENCY TELEPHONE NUMBER**  
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**2. COMPOSITION/INGREDIENT INFORMATION**

Ingredient / CAS Number	Exposure Limits	Concentration
Triethanolamine CAS #102-71-6	OSHA PEL: 3 ppm ACGIH TLV: 3 ppm	Trade Secret
Ethylene Glycol CAS #107-21-1	OSHA PEL: 50 ppm ACGIH TLV: 50 ppm	Trade Secret
Deionized Water CAS #7732-18-5	OSHA PEL: Not established ACGIH TLV: Not established	Trade Secret

**3. HAZARDS IDENTIFICATION**

**EYE CONTACT:** Exposure can cause irritation and burning of the eyes. May cause corneal injury.

**SKIN CONTACT:** May cause irritation, redness, and pain, especially on prolonged or repeated contact.

**INGESTION:** May be fatal if swallowed. May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, lumbar pain and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure, pulmonary edema, and severe kidney damage may develop.

**INHALATION:** Inhalation of vapors or mists of the product may be irritating to the respiratory system.

**4. FIRST AID MEASURES**

**EYES:** Flush with plenty of water for at least 15 minutes. Get medical attention.

**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, administer oxygen and get medical attention.

**INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Call a physician. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

## 5. FIRE AND EXPLOSION HAZARDS

**FLASH POINT:** 116°C (241°F)

**FLAMMABLE LIMITS IN AIR:** Lower-1.5% Upper-15.3%

**AUTOIGNITION TEMPERATURE:** 324°C (427°F)

**EXTINGUISHING MEDIA:** Dry chemical, carbon dioxide, alcohol foam or water spray.

**PROTECTIVE EQUIPMENT:** Wear self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION MATERIALS:** Oxides of both carbon and nitrogen.

**FIRE FIGHTING PROCEDURES:** Isolate and restrict area access. Stop leak only if safe to do so. Move containers from fire area if you can do it without risk. Fight fire from a safe distance and from a protected location. Use flooding quantities of water for fire and water spray or fog for vapors. Containers exposed to intense heat from fire should be cooled with water to prevent vapor pressure build-up which could result in container rupture. This material may produce a floating fire hazard in extreme fire conditions. This product can produce flammable vapors which may travel to a source of ignition and flash back.

## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES:** Wear appropriate personal protective equipment. Isolate hazard area and restrict access. Stop leak only if safe to do so. Remove ignition sources and work with non-sparking tools.

**SMALL SPILLS:** Soak up with absorbent material and scoop into containers.

**LARGE SPILLS:** Prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

**ENVIRONMENTAL:** Prevent entry into sewers or streams, dike if needed. Consult local authorities.

## 7. HANDLING AND STORAGE

**HANDLING:** Wear protective clothing and respiratory protection. Do NOT handle or store near an open flame, heat, or other sources of ignition. DO NOT pressurize, cut, heat, or weld containers.

**STORAGE:** Keep in a tightly closed container. Store in a cool, dry, ventilated area, away from heat and ignition sources. Protect against physical damage. Do not store at temperatures above 110°F (43°C). Avoid oxidizers and acidic materials.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Mechanical general/local exhaust to control vapor or mist below maximum exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

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

**SKIN:** Wear chemically resistant boots, gloves, and chemical suit (Tychem or equivalent).

**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:** Colorless to yellow liquid with slight ammonia odor

**pH:** Not available

**SPECIFIC GRAVITY:** 1.107

**BOILING POINT:** >197°C (>387°F)

**FREEZING POINT:** Not available

**MELTING POINT:** Not available

**VAPOR PRESSURE:** Not available

**VAPOR DENSITY:** Not available

**EVAPORATION RATE:** Not available

**SOLUBILITY IN WATER:** Soluble

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable under normal conditions of use and storage. Darkens on exposure to air or light.

**CONDITIONS TO AVOID:** Avoid excessive heat, open flames and all ignition sources. Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

**MATERIALS TO AVOID:** Strong oxidizing agents. Strong acids and bases. Corrosive to copper, brass, and zinc may soften and/or discolor iron. Halogenated hydrocarbons.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposition products can include and are not limited to: oxides of nitrogen, oxides of carbon, alcohols, ethers, aldehydes.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

No data has been obtained for the blend.

**CARCINOGENICITY:** Individual components are not considered carcinogens by NTP, IARC, or OSHA.

**IARC:** Group 3 for Triethanolamine.

**TERATOGENICITY:** Ethylene Glycol ingestion has shown to produce dose-related teratogenic effects in laboratory animals.

**REPRODUCTIVE EFFECTS:** Ingestion of large amounts of Ethylene Glycol has been shown to interfere with reproduction in animals.

**MUTAGENICITY:** N/A

**ACUTE ORAL LD50 (rat)**

**TRIETHANOLAMINE:** 4190 mg/kg

**ETHYLENE GLYCOL:** 4000 mg/kg

**ACUTE DERMAL LD50 (rabbit)**

**TRIETHANOLAMINE:** 2000 mg/kg

**ETHYLENE GLYCOL:** 9530 5L/kg

## 12. ECOLOGICAL INFORMATION

**TRIETHANOLAMINE**

**LC50 (fathead minnow):** 11800 mg/L

**LC50 (goldfish):** 5000 mg/L

**ETHYLENE GLYCOL**

**LC50 (bluegill):** 27500 mg/L

**LC50 (goldfish):** 27500 mg/L

**LC50 (rainbow trout):** 41000 mg/L

**13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with local, state, and federal regulations.

**14. TRANSPORT INFORMATION****DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Not regulated

**HAZARD CLASS:** None

**UN NUMBER:** Not applicable

**PACKING GROUP:** Not applicable

**LABEL:** Not applicable

**PLACARD:** Not applicable

**NMFC (NATIONAL MOTOR FREIGHT CARRIERS)**

**FREIGHT CLASS:** 60

**15. REGULATORY INFORMATION****CERCLA/SARA****SECTION 302**

**Triethanolamine:** Not listed

**Ethylene Glycol:** Not listed

**SECTION 313**

**Triethanolamine:** Not listed

**Ethylene Glycol:** Listed

**TSCA REGULATORY:** All components of this product are either on the TSCA Inventory or exempt.

**16. OTHER INFORMATION**

The information on this MSDS is accurate to the best of Avanti International's knowledge. Avanti International makes no expressed or implied warranty, and in no case shall be liable for consequential, special, or indirect damages resulting from the use or handling of this product.