



A V-101 CATALYST T+ SAFETY DATA SHEET

Date Issued: 06/01/2015

Section 1: Identification

GHS Product Identifier: AV-101 Catalyst T+

Classification: Additive

Product Use: Industrial Use Only

Supplier

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24 HR. EMERGENCY TELEPHONE NUMBER

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Section 2: Hazards Identification

GHS Classification

Hazard Class	Category	Exposure Route
Acute tox.	5	Acute toxicity (Oral)
Skin irrit	2	Skin irritation
Resp. sens.	1	Respiratory sensitization
Skin sens.	1	Skin sensitization
Carc.	2	Carcinogenicity
STOT RE	2	Specific target organ toxicity – repeated exposure

GHS Label Elements

Hazard pictograms:



Signal Word:	Warning
Hazards Statements:	
H303	Maybe harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary Statements:	Prevention:
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin and face thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face.
P284	In case of inadequate ventilation wear respiratory protection.
	Response:
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

	breathing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a poison center or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a poison center or doctor/physician.
P362 + P364	Take off contaminated clothing and wash before reuse.
	Storage:
P405	Store locked up.
	Disposal:
P501	Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Section 3: Composition/Information on Ingredients

Weight %	Components	CAS-No.	Classification
72.5%	Triethanolamine	102-71-6	Not classified for physical or health hazards under GHS.
15%	Diethanolamine	111-42-2	Acute toxicity Category 5 Oral. Skin irritation Category 2. Respiratory sensitization Category 1. Skin sensitization Category 1. Carcinogenicity Category 2 Specific target organ toxicity - Repeated exposure Category 2
12.5%	Water	7732-18-5	Not classified for physical or health hazards under GHS.

Section 4: First-Aid Measures

Description of First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Move victim to fresh air. If not breathing, give artificial respiration. Get medical attention.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 20 minutes with plenty of water holding eyelids open. Get medical attention.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth to an unconscious victim. Get medical attention.

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in section 2 and or section 11.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Dry chemical, foam, sand and soil, carbon dioxide and water spray for large fires.

Fire-fighting Procedure

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

Hazardous Decomposition Products

By Fire and High Heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x)

Unusual Fire/Explosion Hazards

N/A

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Clear danger area. Ensure adequate ventilation. Remove ignition sources. Wear suitable personal protective clothing and equipment.

Environmental Precautions

Do not discharge into drains/surface waters/groundwater.

Methods and Material for Containment and Cleaning-Up

Use appropriate tools to put the spilled solid in suitable container for recovery or disposal.

Section 7: Handling and Storage

Precautions for Safe Handling

Avoid ingestion, inhalation, skin and eye contact. Avoid inhalation of vapor or mist. Handle in accordance with good industrial hygiene practice and any legal requirements.

Conditions for Safe Storage (Including Any Incompatibilities)

Storage incompatibility: Avoid oxidizers

Suitable materials for containers: HDPE, metal

Storage stability:

Storage temperature: 45 - 95 °F

Section 8: Exposure Controls/Personal Protection

Components with Occupational Exposure Limits

Diethanolamine

ACGIH TLV

TWA value 1 mg/m³

OSHA PEL

Not established

Liver damage

Kidney damage

Confirmed animal carcinogen with unknown relevance to humans

Danger of cutaneous absorption

Triethanolamine

ACGIH TLV

TWA value 5 mg/m³

Advice on system design:

Provide local exhaust ventilation to control vapors/mists.



Personal Protective Equipment

Respiratory Protection:

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hand Protection:

Chemical resistant protective gloves, Suitable materials, chloroprene rubber (Neoprene), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, fluoroelastomer (Viton), nitrile rubber (Buna N)

Eye Protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

General Safety and Hygiene Measures:

Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and after shifts. Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Section 9: Physical and Chemical Properties

Appearance: Clear liquid

Odor: Odorless

Odor Threshold: Not determined

pH: 10.5 – 11.5 (@ 14.9% solution)

Freezing Point: -40°F (40°C)

Boiling Point: Decomposes

Flashpoint: Not determined

Evaporation Rate: Not determined

Flammability: Not flammable

Lower Explosion Limits: Not determined

Upper explosion limits: Not determined

Vapor Pressure: Not determined

Vapor Density: Not determined

Relative Density: 1.124 @ 72°(22°C)

Solubility in Water: Completely soluble

Partition Coefficient n-octanol/water: Not determined

Auto-ignition Temperature: Not determined

Decomposition Temperature: Not determined

Viscosity: Solid

Section 10: Stability and Reactivity

Reactivity

No data available

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No data available

Conditions to avoid

Air exposure to moisture and light.

Incompatible materials

Acids, Oxidizing agents, Copper, Zinc, Iron.

Hazardous decomposition products

No data available

Section 11: Toxicological Information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Oral

Information on Triethanolamine (TEA)

Type of value: LD50

Species: rat (male/female)

Value: 5,530 mg/kg

Literature Data

Information on Diethanolamine (DEA)

Type of value: LD50

Species: rat (male/female)

Value: 710 mg/kg

Literature Data

ATEmix:2,941 mg/kg

Inhalation

No Data

Dermal

Information on Triethanolamine (TEA)

Type of value: LD50

Species: rabbit (male/female)

Value: > 2,250 mg/kg

Literature Data

Information on Diethanolamine (DEA)

Type of value: LD50

Species: rabbit (male/female)

Value: 12,000 mg/kg

Literature Data

ATEmix:3,030 mg/kg

Assessment Other Acute Effects

Assessment of STOT single: no data.

Irritation / Corrosion

Assessment of irritating effects:

Information on Triethanolamine (TEA): Skin Rabbit (no irritation-24hr) Eyes Rabbit (no eye irritation-24hr)

Information on Diethanolamine (DEA): Skin Rabbit (mild irritation-24hr) Eyes Rabbit (severe eye irritation-24hr)

Sensitization

Assessment of sensitization: No data

Chronic Toxicity/Effects

Repeated Dose Toxicity

Assessment of repeated dose toxicity: No data

Genetic Toxicity

Assessment of mutagenicity: No Data.

Carcinogenicity

Information on Diethanolamine (DEA):

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Diethanolamine)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Literature Data

Reproductive toxicity

Assessment of reproduction toxicity: No data

Teratogenicity

Assessment of teratogenicity: No data.

Development

No Data

Additional information

Information on Triethanolamine (TEA)

RTECS: KL9275000

Kidney injury may occur., Dermatitis

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

Information on Diethanolamine (DEA):

RTECS: KL2975000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

Section 12: Ecological Information

Toxicity

Aquatic Toxicity

Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product may hydrolyze. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish

Information on Triethanolamine (TEA)

*LC50 (96 h) 450 – 1,000 mg/l, *Lepomis macrochirus* (Bluegill)*

Literature data.

Information on Diethanolamine (DEA)

*LC50 (96 h) 1,460 mg/l, *Pimephales promelas* (fathead minnow)*

Literature data.

Aquatic invertebrates

Information on Triethanolamine (TEA)

*EC50 - *Daphnia* (water flea) - 609.98 mg/l - 48 h*

Literature data

Information on Diethanolamine (DEA)

EC50 - *Daphnia magna* (Water flea) - 55 mg/l - 48 h
Literature data

Microorganisms/Effect on Activated Sludge

The product has not been tested.

Persistence and Degradability

Assessment Biodegradation and Elimination (H₂O)

Information on Triethanolamine (TEA)

Result: 96 % - Readily biodegradable

Literature data

Information on Diethanolamine (DEA)

Result: > 90 % - Readily biodegradable

Literature data

Bioaccumulation Potential

No data. The product has not been tested.

Mobility in soil

No data.

Additional information

None

Section 13: Disposal Considerations

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

Section 14: Transport Information

DOT (Department of Transportation)

Proper Shipping Name: Not regulated if shipped in container less than RQ amount.

Hazard Class: Not applicable

UN Number: Not applicable

Packing Group: Not applicable

Label: Not applicable

Placard: Not applicable

NMFC (National Motor Freight Carriers)

Freight Class: 60

RQ: 666.66 lbs.

Section 15: Regulatory Information

EPCRA 311/312 (hazard categories): Acute; Chronic

CAS Number Chemical name

102-71-6 Triethanolamine

111-42-2 Diethanolamine

EPCRA 313:

CAS Number Chemical name

111-42-2 Diethanolamine

CERCLA RQ CAS Number Chemical name

111-42-2 Diethanolamine Reportable quantity: 100 lbs.

State regulations

State RTK CAS Number Chemical name

MA, NJ, PA 102-71-6 Triethanolamine

MA, NJ, PA 111-42-2 Diethanolamine

CA Prop. 65:

WARNING: This product contains a chemical known to the State of California to cause cancer.
Diethanolamine Carcinogenic.

NFPA Hazard codes:

Health : 0 - Fire: 1 - Reactivity: 0 - Special:

HMIS III rating

Health: 1 - Flammability: 1 – Physical Hazard:1 – PPE: K (Hood, Gloves, Protective Suit & Boots)

Section 16: Other Information

The information provided in this Safety Data Sheet is correct to the best of Avanti International's knowledge, information and belief at the date of this publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process, unless specified in the text. AVANTI INTERNATIONAL MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. Each user is also responsible for evaluating the conditions of use and designing the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. Avanti International assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.