

AV-333 INJECTAFLEX™**SECTION 1. IDENTIFICATION**

Product Identifier	AV-333 INJECTAFLEX
Other Means of Identification	Hydrophilic Grout
Recommended Use	Industrial Use Only.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	Avanti International, 822 Bay Star Blvd, Webster, TX, 77598, USA, 281.486.5600, avantigrout.com
Emergency Phone No.	ChemTrec, 800.424.9300
Date of Preparation	April 10, 2018

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 2; Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A; Respiratory sensitization - Category 1A; Skin sensitization - Category 1; Carcinogenicity - Category 2; Specific target organ toxicity (single exposure) - Category 3; Aquatic hazard (Chronic) - Category 3

Label Elements

Signal Word:

Danger

Hazard Statement(s):

H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233	Keep container tightly closed.

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P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical, ventilating, and lighting equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash hands and skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P284 In case of inadequate ventilation wear respiratory protection (NIOSH approved air-purifying respirator with an organic vapour cartridge).

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water/
 Soap

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTRE or doctor if you feel unwell.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice or attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P370 + P378 In case of fire: Use appropriate foam, carbon dioxide, dry chemical powder, water to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Acetone	67-64-1	12	propanone	
Toluene-2,4-diisocyanate	584-84-9	1	TDI	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

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First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can irritate the nose and throat. Can cause lung injury.

Immediate Medical Attention and Special Treatment

Target Organs

Respiratory system.

Special Instructions

Monitor lung function.

Medical Conditions Aggravated by Exposure

Asthma, respiratory conditions.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Can ignite if strongly heated.

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides; very toxic polycyclic aromatic hydrocarbons.

Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Fight fire from a safe distance or a protected location. Fight fire from a protected, explosion-resistant location or maximum distance possible. Approach fire from upwind to avoid hazardous vapours or gases. Use water spray to dilute spills to non-flammable mixtures. Knock down vapours or gases with water fog or fine water spray. Before entry, especially into confined areas, use an appropriate monitor to check for: flammable or explosive atmosphere, toxic gases or vapours.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Eliminate all ignition sources. Use grounded, explosion-proof equipment.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Contaminated absorbent poses the same hazard as the spilled product. Dike spilled product to prevent runoff. Knock down gas with fog or fine water spray. Remove or recover liquid using pumps or vacuum equipment. Store recovered product in suitable containers that are: water-filled.

Other Information

Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

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Obtain special instructions before use. Avoid breathing in this product. Prevent all skin contact. Do not get in eyes, on skin or on clothing. Avoid exposure during pregnancy and while nursing. Avoid generating vapours or mists. Prevent uncontrolled release of product. Avoid release to the environment. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not use near welding operations or other high energy sources. Do not spray on an open flame or other ignition source. Do not pierce or burn container, even after use. Avoid heating that will increase the amount of vapours. Do not weld, cut or perform hot work on empty container until all traces of product have been removed. Increase conductivity by reducing flow rate in transfer operations and/or handle at lower temperature. Electrically bond and ground equipment. Ground clips must contact bare metal. Use non-sparking tools. Avoid ALL unprotected contact with this product or with contaminated equipment/surfaces. Wear personal protective equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Keep dry. Prevent exposure to water and humidity. Handle under inert gas atmosphere in dry equipment. Prevent any accidental contact with water in handling and storage areas. Keep containers tightly closed when not in use or empty. Use an inert gas in the handling equipment and storage vessel. General hygiene considerations: it is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Do NOT smoke in work areas. Do NOT eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Clean clothing, shoes and leather goods. Immediately remove contaminated clothing using the method that minimizes exposure.

Conditions for Safe Storage

Store in an area that is: cool, temperature-controlled, dry, ventilated, out of direct sunlight and away from heat and ignition sources, an approved, fire-resistant area, separate from incompatible materials (see Section 10: Stability and Reactivity), on the ground floor or preferably, in an isolated, detached building. Electrically bond and ground containers. Ground clips must contact bare metal. Store product under an inert gas such as nitrogen.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Toluene-2,4-diisocyanate	0.001 ppm	0.005 ppm				
Acetone	250 ppm A4	500 ppm C A4	1000 ppm			

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Use a dry, inert gas in the process system. Control static electricity discharges which includes bonding of equipment to ground. Use only non-combustible, compatible materials for walls, floors, ventilation system, air cleaning devices, pallets, shelving. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots. Wear a chemical splash suit and respiratory protection.

Suitable materials are: Chemical Resistant Gloves: butyl rubber, neoprene rubber, nitrile rubber, Viton®/butyl rubber. Chemical Resistant Suit: Barrier® (PE/PA/PE), Saranex®, Tychem® SL (Saranex™).

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge. Either full-face piece or half-face piece with splash goggles.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid. Particle Size: Not available
Odour	Sweet
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	500 °F (260 °C)
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.12
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); 350 - 750 centipoises (dynamic)
Other Information	
Physical State	Liquid
Molecular Formula	Not available
Molecular Weight	Not available
Bulk Density	Not available
Surface Tension	Not available
Critical Temperature	Not available
Electrical Conductivity	Not available
Vapour Pressure at 50 deg C	Not available
Saturated Vapour Concentration	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

High temperatures. Sunlight. Water, moisture or humidity.

Incompatible Materials

Polymerizes on contact with: alcohols (e.g. ethanol), alkanolamines (e.g. triethanolamine), amines (e.g. triethylamine), glycols (e.g. ethylene glycol), reducing agents (e.g. hydroquinone), water.

Not corrosive to metals.

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Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Toluene-2,4-diisocyanate	0.1 mg/L (rat) (4-hour exposure) (vapour)	6170 mg/kg (rat)	> 16000 mg/kg (rabbit)
Acetone	30000 ppm (male rat) (4-hour exposure)	5800 mg/kg (female rat)	> 15800 mg/kg (rabbit)

Inhalation ATEmix = 10 mg/L (4-hour exposure) (vapour)

Oral ATEmix = 44822.14 mg/kg

Skin Corrosion/Irritation

There is limited evidence of very mild irritation.

Serious Eye Damage/Irritation

There is limited evidence of very mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May be harmful based on information for closely related materials.

Skin Absorption

No information was located.

Ingestion

No information was located.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

If inhaled: may cause irritation of the respiratory system. Respiratory tract injury has been observed.

Respiratory and/or Skin Sensitization

Respiratory sensitizer. Skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Toluene-2,4-diisocyanate	Group 2B	A3	Reasonably anticipated	Not Listed

No information was located.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

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No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No information was located.

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	1993	Flammable Liquid, (Acetone)	3	II
Canadian TDG	1993	Flammable Liquid, n.o.s. (Acetone)	3	II

Environmental Hazards Not applicable

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 2** **Flammability - 1** **Instability - 1**
SDS Prepared By Avanti International

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Revision Indicators Not applicable.
Key to Abbreviations ACGIH® = American Conference of Governmental Industrial Hygienists
IARC = International Agency for Research on Cancer
NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health
NTP = National Toxicology Program
OSHA = US Occupational Safety and Health Administration
RTECS® = Registry of Toxic Effects of Chemical Substances

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).