AV-118® Duriflex

SECTION 1. IDENTIFICATION

Product Identifier	AV-118 Duriflex
Other Means of Identification	Chemical 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

SECTION 2. HAZARD IDENTIFICATION

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

Classification

Acute toxicity (Oral) - Category 3; Skin sensitization - Category 1; Germ cell mutagenicity - Category 1B; Carcinogenicity - Category 1B; Reproductive toxicity - Category 2; Specific target organ toxicity (repeated exposure) - Category 1

Label Elements

Danger

Hazard Statement(s):

H301	Toxic if swallowed.
H317	May cause an allergic skin reaction.
H340	May cause genetic defects if swallowed.
H361	Suspected of damaging fertility if swallowed.
H350	May cause cancer if swallowed.
H372	Causes damage to organs (nervous system) through prolonged or repeated exposure if swallowed.

Precautionary Statement(s):

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/vapours/spray.
P264	Wash hands and skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
P330	Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of water.
P308 + P313 IF exposed or concerned: Get medical advice or attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice or attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
Storage:
P405 Store locked up.
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
N-(HYDROXYMETHYL) ACRYLAMIDE	924-42-5	43	NMA	
Acrylamide solid	79-06-1	2.5	AAM	
Formaldehyde gas	50-00-0	2.5	Methanal	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell. If exposed or concerned, get medical advice or attention.

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. Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If swallowed: large amounts can irritate the nose and throat. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. Can harm the nervous system.

Immediate Medical Attention and Special Treatment

Target Organs

Nervous system.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Closed containers may rupture violently when heated releasing contents.
Very toxic carbon monoxide, carbon dioxide; flammable hydrogen; corrosive, oxidizing nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Non-emergency personnel: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: 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. Large spills or leaks: dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Get expert advice before treating the spilled product with other chemicals to make it less hazardous. Store recovered product in suitable containers that are: tightly-covered. Contact emergency services and manufacturer/supplier for advice.

Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Prevent all skin contact. Avoid repeated or prolonged skin contact. Do not get in eyes. Do not swallow. Avoid generating vapours or mists. Prevent uncontrolled release of product. Do NOT work alone with this product. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Wear personal protective equipment to avoid direct contact with this chemical. Keep containers tightly closed when not in use or empty. General hygiene considerations: do NOT smoke in work areas. Do NOT eat, drink or store food in work areas. Consider using a double locker-shower facility. Wash hands thoroughly after handling this material. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Conditions for Safe Storage

Store in an area that is: well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Acrylamide solid	0.03 mg/m3 (IFV)		0.3 mg/m3			
Formaldehyde gas	0.3 ppm C	2 ppm		0.75 ppm		

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Provide safety shower in work area, if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles.

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, nitrile rubber, polyethylene, polyvinyl chloride, Viton®. Chemical Resistant Suit: Barrier® (PE/PA/PE), Tychem® SL (Saranex™).

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s). And 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 applicable
Odour	Pungent
Odour Threshold	Not available
pH	6.0 - 7.0
Melting Point/Freezing Point	14 ºF (-10 ºC) (melting); 14 ºF (-10 ºC) (freezing)
Initial Boiling Point/Range	Not available
Flash Point	> 199 ºF (93 ºC) (closed cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	3.17 kPa (23.76 mm Hg) at 25 ºC (77 ºF)
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.074 at 25 ºC (77 ºF)
Solubility	Soluble in all proportions in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); 5 - 10 centipoises at 20 ºC (68 ºF) (dynamic)

Other Information

Physical State	Liquid
Molecular Formula	Not applicable
Molecular Weight	Not applicable
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

Polymerizes vigorously, unless inhibited.

Chemical Stability

Stable if inhibited.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use. Polymerizes in the presence of heat, inhibitor depletion, sunlight.

Conditions to Avoid

Heat. Sunlight. Depletion of inhibitor. Prolonged storage.

Incompatible Materials

Polymerizes on contact with: oxidizing agents (e.g. peroxides).
Not corrosive to metals.

Hazardous Decomposition Products

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

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin absorption; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
N-(HYDROXYMETHYL) ACRYLAMIDE		474 mg/kg (rat)	
Acrylamide solid	> 5.7 ppm (rat) (4-hour exposure)	177 mg/kg (rat)	1141 mg/kg (rabbit)
Formaldehyde gas	368 ppm (male mouse) (4-hour exposure) (gas)		

Oral ATEmix = 953.82 mg/kg

Dermal ATEmix = 45640 mg/kg

Skin Corrosion/Irritation

May cause mild irritation based on information for closely related chemicals.

Serious Eye Damage/Irritation

May cause mild irritation based on information for closely related chemicals.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Very toxic, can cause death based on animal tests. (Formaldehyde gas)

Skin Absorption

May be harmful based on animal tests. (N-(HYDROXYMETHYL)ACRYLAMIDE)

Ingestion

Toxic, can cause death based on animal tests. (Acrylamide solid)

Aspiration Hazard

May cause lung damage if aspirated based on physical properties (e.g. kinematic viscosity) and chemical family (hydrocarbon). (Formaldehyde gas)

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause effects on the peripheral nervous system. (Acrylamide solid). (N-(HYDROXYMETHYL)ACRYLAMIDE) may cause irritation of the respiratory system. May cause respiratory tract injury, lung injury. (Formaldehyde gas)

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
N-(HYDROXYMETHYL) ACRYLAMIDE	Not Listed	Not designated	Not Listed	Not Listed

Acrylamide solid	Group 2A	A3	Reasonably anticipated	Not Listed
Formaldehyde gas	Group 1	A1	Known carcinogen	Listed

Reproductive Toxicity

Development of Offspring

Conclusions cannot be drawn from the limited studies available.

Sexual Function and Fertility

May cause effects on sexual function and/or fertility.

Effects on or via Lactation

Conclusions cannot be drawn from the limited studies available.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Acrylamide solid	100-162 mg/L (96-hour)	98-98 mg/L (48-hour)		

Persistence and Degradability

Degrades rapidly based on quantitative tests.

Bioaccumulative Potential

This product and its degradation products are not known to bioaccumulate.

Mobility in Soil

If released into the environment, this product can move rapidly through the soil.

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. The preferred waste management options are: bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

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.

CEPA - National Pollutant Release Inventory (NPRI)

Part 1A.

USA

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

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating	**Health - 1 Flammability - 0 Instability - 1**
SDS Prepared By	Avanti International
Date of Preparation	March 05, 2018
Date of Last Revision	May 07, 2018
Revision Indicators	Not applicable.
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation 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).