



SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Identifier

Product Name ARMOR AR500 (50 VOC)

Alternate Product ID

Recommended Use of the Chemical and Restrictions on Use

Recommended use Decorative Concrete Sealer & Concrete Cure & Seal

Uses advised against No data available

Details of the Supplier of the Safety Data Sheet

Distributor Address Foundation Armor, 3 Howe Drive, Suite 2, Amherst, NH 03031

Emergency Telephone Number

Supplier phone number 866-306-0246

24 Hour emergency phone number 800-424-9300 (United States & Canada) 1-703-527-3887 (International)

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable Liquids	Category 2
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 2
Specific Target Organ Toxicity (Single Exposure) Respiratory	Category 3
Specific Target Organ Toxicity (Single Exposure) Narcotic Effects	Category 3
Aspiration Hazard	Category 1

Signal Word Danger!

Hazard Statements

H225 - Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.

Pictograms



Precautionary Statements

Prevention

- 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.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing vapors or mist.
- P262 - Do not get in eyes, on skin, or on clothing.
- P264 - Wash skin thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- 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 that meets the requirements in OSHA's Respiratory Protection Standard (29 CFR 1910.134) or regional standards.

Response

- P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P332 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P362 - Take off contaminated clothing and wash before reuse.
- 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.
- P337 + P313 - If eye irritation persists: Get medical advice/attention.
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P310 - Immediately call a POISON CENTER or doctor/physician.
- P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
- P312 - Call a poison center/doctor if you feel unwell.
- P314 - Get medical advice/attention if you feel unwell.

Storage

- P403 + P233 + P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- P405 - Store locked up.

Disposal

- P501 - Dispose of contents/container to an approved waste disposal plant in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) Not Otherwise Classified (HNOC)

None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS Number	Weight Percentage
2-Propanone	67-64-1	*
p-Chlorobenzotrifluoride	98-56-6	*
Solvent Naphtha (Petroleum), Heavy Aromatic	64742-94-5	*
Poly(Methyl methacrylate/n-Butyl methacrylate/Methacrylic acid)	28262-63-7	*

Constituents of Solvent Naphtha (Petroleum), Heavy Aromatic CAS No. 64742-94-5

Chemical Name	CAS Number	Weight Percentage
Heavy Aromatic Solvent Naphtha	64742-94-5	80 - 100
Naphthalene	91-20-3	< 10
1,2,4-Trimethylbenzene	95-63-6	< 5

*The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

First Aid Instructions/Measures

Eye Contact

In case of contact, flush eyes with plenty of water for 15 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

Skin Contact

In case of skin contact, wash affected areas with soap and water for 15 minutes. For minor skin contact, avoid spreading material on unaffected skin. Immediately remove contaminated clothing and shoes. Destroy or thoroughly wash clothing before reuse. Destroy or thoroughly clean shoes before reuse. Get medical attention if irritation develops or persists.

Inhalation

If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not use mouth-to-mouth method if victim inhaled the substance. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical attention if irritation develops or persists.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

Aspiration may cause pulmonary edema and pneumonitis. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. May cause central nervous system effects. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness, and other central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Direct eye contact may cause redness, stinging, tearing, swelling, and blurred vision. Direct skin contact may cause slight or mild, transient irritation, redness or pain.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General Information

Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water fog. Alcohol resistant foam. Carbon dioxide (CO₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

High volume water jet/stream. This method may scatter and spread fire.

Specific Fire and Explosion Hazards Arising from the Chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material may float and may ignite on surface of water. During fire, gases hazardous to health may be formed. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations distant from the material handling point. During fire, gases hazardous to health may be formed. Static discharges may occur in this material.

Hazardous Decomposition Products

Toxic vapors and gases, including oxides of carbon, acrid smoke, and irritating fumes.

Special Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool surrounding fire-exposed equipment, containers, tanks and structures with water spray or stream. Take precautionary measures against static discharges. Fight fires from a safe distance. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Environmental Precautions

Avoid subsoil penetration. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

Containment and Clean-up Measures

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Avoid discharge into drains, water courses or onto the ground.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for Safe Storage

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers.

Incompatible Materials

Stable under recommended storage conditions. Avoid strong oxidizing agents. Keep away from sources of ignition. No smoking. This material may have a low electrical conductivity and therefore may accumulate dangerous levels of static electricity. An ignitable vapor-air mixture can form inside storage tanks. The user must be sure to dissipate static charge by careful bonding and grounding of all equipment, and personnel involved in fluid transfer should conduct continuity checks to prove effectiveness of bonding and grounding.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits/Guidelines

Exposure Limits/Guidelines		
Chemical Name	Result	ACGIH/OSHA
Naphthalene (CAS 91-20-3)	STEL	75 mg/m3 15 ppm
	TWA	50 mg/m3 10 ppm
	PEL	50 mg/m3 10 ppm
1,2,4-Trimethylbenzene (CAS 95-63-6)	STEL	No data available
	TWA	125 mg/m3 25 ppm
	PEL	No data available
Heavy Aromatic Solvent Naphtha (CAS 64742-94-5)	STEL	No data available
	TWA	200 mg/m3
	PEL	No data available
2-Propanone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
	PEL	2400 mg/m3 1000 ppm
p-Chlorobenzotrifluoride (CAS 98-56-6)	STEL	No data available
	TWA	No data available
	PEL	No data available
Methyl methacrylate (CAS 80-62-6)	STEL	410 mg/m3 100 ppm
	TWA	410 mg/m3 100 ppm
	PEL	No data available
n-Butyl methacrylate (CAS 97-88-1)	STEL	No data available
	TWA	No data available
	PEL	No data available
Methacrylic acid (CAS 79-41-4)	STEL	No data available
	TWA	50 ppm
	PEL	No data available

Industrial Hygiene/Ventilation Measures

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Personal Protective Equipment

Respiratory protection

Ensure adequate ventilation, especially in confined areas. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. Wear appropriate breathing apparatus if air renewal is not sufficient to maintain vapor concentrations below threshold limit values.

Hand protection

Wear chemical resistant, impermeable gloves.

Eye protection

Chemical safety goggles or safety glasses with side-shields. Chemical safety goggles in combination with a full-face shield if a splash hazard exists.

Skin protection

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Where spray mist/vapor is anticipated, permeation resistant clothing is recommended.

Additional protective measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available. Avoid breathing vapor or mist. Avoid contact with skin, eyes, and clothing. Do not ingest.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Transparent
Color:	Clear
Odor:	Pungent & Aromatic
Odor Threshold:	Not Available
Upper/Lower Flammability Limits:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	Not Available
pH:	Not Available
Relative Density:	.944 @ 70° F
Melting Point:	Not Available
Freezing Point:	Not Available
Solubility:	Insoluble
Initial Boiling Point/Range:	Not Available
Flash Point:	- 4° F
Evaporation Rate:	Not Available
Partition Coefficient: n-octanol/water:	Not Available
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity:	Not Available
Volatile Organic Compounds (VOC):	< 50 g/L

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Material is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability

Material is stable under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Toxic vapors and gases, including oxides of carbon, acrid smoke, and irritating fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Likely routes of exposure include inhalation by direct contact and vapor inhalation, eye contact by direct contact, skin contact by direct contact and ingestion by direct contact.

Health Effects and Symptoms

Breathing small amounts during normal handling is not likely to cause harmful effects. Breathing large amounts may cause depression of the central nervous system, nausea, headache, dizziness, drowsiness or unconsciousness. Exposure may cause serious eye irritation, including itching, burning, redness and tearing. Ingestion may result in headache, dizziness or drowsiness. Aspiration may cause chemical pneumonitis or pulmonary edema. Exposure causes skin irritation or drying. Prolonged exposure may cause dermatitis or skin cracking. May be fatal if swallowed and enters airways. Prolonged inhalation may be harmful.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Mutagenicity	Not expected to be mutagenic to humans
Reproductive Toxicity	Not expected to cause reproductive or developmental effects.
Carcinogenicity	May cause cancer

Product

Naphthalene (CAS 91-20-3)	2B Possibly carcinogenic to humans
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Components

91-20-3 Naphthalene

Oral	LD50: 490 mg/kg (rat)
Dermal	LD50: > 2 g/kg (rabbit)

95-63-6 1,2,4-Trimethylbenzene

Oral	LD50: 6 g/kg (rat)
Dermal	LD50: > 3160 mg/kg (rabbit)

67-64-1 2-Propanone

Oral	LD50: 3000 mg/kg (mouse), 5340 mg/kg (rabbit), 5800 mg/kg (rat)
Dermal	LD50: 20000 mg/kg (rabbit)
Inhalation	LC50: 76 mg/L (rat) 4h, 50.1 mg/L (rat) 8h

98-56-6 p-Chlorobenzotrifluoride

Oral	LD50: 13 g/kg (rat)
Dermal	LD50: > 2000 mg/kg (rabbit)
Inhalation	LC50: 33 mg/L (rat) 4h

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

91-20-3 Naphthalene

Toxicity to fish

LC50: 1.11 - 1.68 mg/l (Oncorhynchus gorbuscha, 96h)

Toxicity to Crustacea

EC50: 1.09 - 3.4 mg/l (Daphnia Magna, 48h)

95-63-6 1,2,4-Trimethylbenzene

Toxicity to fish

LC50: 7.19 - 8.28 mg/l (Pimephales Promelas, 96h)

67-64-1 2-Propanone

Toxicity to fish

LC50: 4740 - 6330 mg/l (Oncorhynchus mykiss, 96h)

Toxicity to Crustacea

EC50: 10294 - 17704 mg/l (Daphnia Magna, 48h)

98-56-6 p-Chlorobenzotrifluoride

Toxicity to fish

LC50: 3 mg/l (Zebra fish, 96h)

Toxicity to algae/aquatic plants

EC50: > 0.41 mg/l (Green algae, 96h)

Toxicity to Crustacea

EC50: 2 mg/l (Daphnia Magna, 48h)

Additional Ecotoxicological Remarks

Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment. This product contains volatile organic compounds which have a photochemical ozone creator potential.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose in accordance with Federal, State, and Local laws and regulations. The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name by Regulatory Entity

DOT - Land Transportation

Paint Related Material




Per 49 CFR §172.102 Special Provisions Numerical Code 149, this product may ship as "Limited Quantity" when packaged in containers of less than 5 Liters (1.3 gallons).

IMDG - Sea Transportation

Paint Related Material

IATA - Air Transport

Paint Related Material

Regulatory Information	UN Number	Class	Packaging Group	Label
DOT Classification	1263	3	II	
IMDG Classification	1263	3	II	
IATA Classification	1263	3	II	

SECTION 15: REGULATORY INFORMATION

United States Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

SARA 313

Chemical Name	CAS No.	Weight %	SARA 313 Threshold Value %
1,2,4 - Trimethylbenzene	95-63-6	< 1	No data available
Naphthalene	91-20-3	< 1	No data available

CERCLA

Chemical Name	CAS No.	Hazardous Substances Reportable Quantity (RQ)
Naphthalene	91-20-3	Listed
2-Propanone	67-64-1	Listed

Clean Water Act (CWA)

Chemical Name	CAS No.	CWA - Reportable Quantity	CWA - Hazardous Substances
N/A	N/A	N/A	N/A

SARA 311/312

Flammable (gases, aerosols, liquids, or solids)
 Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Carcinogenicity
 Specific target organ toxicity (single or repeated exposure)
 Aspiration hazard

US State Regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Naphthalene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

This product contains the following Proposition 65 chemicals:

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Naphthalene (CAS 91-20-3) Listed: April 19, 2002

US California Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2,4-Trimethylbenzene (CAS 95-63-6)

Heavy Aromatic Solvent Naphtha (CAS 64742-94-5)

Naphthalene (CAS 91-20-3)

2-Propanone (CAS 67-64-1)

New Jersey Right to Know Substance List

2-Propanone (CAS 67-64-1)

New Jersey Worker and Community Right-to-Know Act

Not regulated

Massachusetts Right to Know Substance List

2-Propanone (CAS 67-64-1)

Pennsylvania Right to Know Hazardous Substances

2-Propanone (CAS 67-64-1)

Pennsylvania Worker and Community Right-to-Know Law

2-Propanone (CAS 67-64-1)

Rhode Island Right to Know Substance List

2-Propanone (CAS 67-64-1)

SECTION 16: OTHER INFORMATION

HMIS Ratings

Health - 2 Flammability - 3 Physical Hazard - 0 Personal Protection - Not Determined

NFPA Ratings

Health - 2 Flammability - 3 Instability - 0 Special Hazards - Not Determined

Issue Date, Revision Date and SDS Version Number

This information is found at the "Footer" of the Safety Data Sheet (all pages). See below.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a 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 process, unless specified in the text.