

VAS 3 CEMENT

1. Product And Company Identification

Supplier

Forbo Siegling, LLC
12201 Vanstory Dr.
Huntersville, NC 28078-8395

Company Contact: Mr. Jay Leighton
Telephone Number: 704-948-0800

Supplier Emergency Contacts & Phone Number

CHEMTREC: (800) 424-9300

Issue Date: 03/19/2007

Product Name: VAS 3 CEMENT
CAS Number: Not Avail.
Chemical Formula: Mixture
MSDS Number: 441

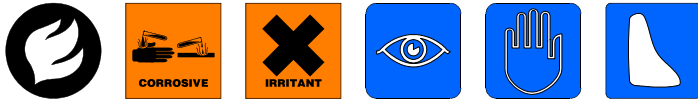
2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
ETHANOL	64-17-5	14.3
FORMIC ACID	64-18-6	66.7
RESORCINOL	108-46-3	19

EMERGENCY OVERVIEW

Flammable. Corrosive. Harmful if inhaled or swallowed. CONTACT YOUR LOCAL POISON CONTROL CENTER IF SWALLOWED! Contact with eyes or skin causes irritation and may cause damage. Fire may produce irritating and poisonous gases.

Hazards Identification (Pictograms)



3. Hazards Identification

Primary Route(s) Of Entry

Inhalation, eye and skin contact

Eye Hazards

Contact will cause irritation and may cause damage to eye tissue.

Skin Hazards

Corrosive to living tissue. Repeated prolonged contact may cause defatting of skin and dermatitis. Contact may cause reddening and irritation.

Ingestion Hazards

Harmful if swallowed. May cause vomiting, headache, nausea, dizziness. Irritation and damage to mucous membranes is likely.

Inhalation Hazards

Inhalation may cause upper respiratory irritation, headache, nausea, dizziness in high concentrations. Chronic exposure to high concentrations (over PEL/TLV) may cause liver damage, namely fatty liver.

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First Aid (Pictograms)



4. First Aid Measures

Eye

If contact occurs flush eyes with water for 15 minutes; get medical attention.

Skin

Wash skin with soap/water. Moisturizing creams may be used as an aid to prevent drying & cracking of skin.

Ingestion

Do not induce vomiting: call your local poison control center for advice.

Inhalation

Remove inhalation victim to fresh air give CPR or artificial respiration if breathing stops. Consult physician.

Fire Fighting (Pictograms)



5. Fire Fighting Measures

Flash Point: 55 °F 13 °C

Flash Point Method: Closed Cup

Fire And Explosion Hazards

Flammable! Keep away from open flame, heat sources and fire. Vapors may form flammable/explosive mixtures with air in confined areas with poor ventilation if used in large quantities.

Extinguishing Media

Carbon dioxide, AFFF/ATC Foam, alcohol type foam, dry chemical. Water may be ineffective. However, use water to cool fire exposed containers.

Fire Fighting Instructions

Always wear fire fighting protective gear and respiratory protection when fighting fires. Water may be ineffective and may spread liquid. However, water fog may be used to cool fire exposed containers.

6. Accidental Release Measures

1. Remove/extinguish all ignition sources such as open flames.
2. Ventilate area of spill or leak.
3. For small quantities absorb on paper towels or similar material. Allow to evaporate in a safe place such as a fume hood. Never dispose of with trash since spontaneous combustion may occur!
4. Large quantity: dike area with suitable absorbent such as vermiculite or kitty litter to prevent spread of material. If available use alcohol type foam to cover spill in order to prevent ignition. Do not allow material to enter confined areas such as pits or sewers since vapors may form explosive mixture with air. Use more absorbent material to soak up material and place in drums or other container for disposal. Spilled product must be disposed of as an ignitable characteristics (EPA) hazardous waste via incineration or other acceptable method; D001, ignitable waste.

NOTE: ALWAYS WEAR PROTECTIVE EQUIPMENT SUCH AS ORGANIC VAPOR RESPIRATOR, GLOVES AND EYE PROTECTION WHEN HANDLING CONTAMINATED MATERIALS!

7. Handling And Storage

No Data Available...

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7. Handling And Storage - Continued

Handling And Storage Precautions

Store away from ignition sources. Keep containers closed when not in use.

Protective Clothing (Pictograms)



8. Exposure Controls/Personal Protection

Engineering Controls

If large quantities are used, local exhaust ventilation should be used. Electrical equipment must conform to NFPA/NEC Standards Article 500 for use in potentially flammable atmospheres or hazardous locations. Under normal conditions of use, normal room ventilation should be adequate.

Eye/Face Protection

Use safety glasses, goggles or face shield to prevent accidental eye contact.

Skin Protection

Nitrile or butyl rubber gloves may be used if repeated contact will occur. Material may irritate skin upon repeated prolonged contact.

Respiratory Protection

Respiratory protection should not be necessary under normal conditions of anticipated use of this product, in small quantities. If necessary, use a chemical cartridge respirator equipped with organic vapor cartridges for levels up to 1000 ppm; gas mask with organic vapor canister. For higher levels type-C supplied air or self contained breathing apparatus may be used. Only NIOSH approved respirators should be used.

Ingredient(s) - Exposure Limits

ETHANOL

ACGIH TLV-TWA: 1000 ppm

OSHA PEL-TWA: 1000 ppm

FORMIC ACID

ACGIH TLV-TWA: 5 ppm

ACGIH TLV-STEL: 10 ppm

OSHA PEL-TWA: 5 ppm

RESORCINOL

ACGIH TLV-TWA: 10 ppm

ACGIH TLV-STEL: 20 ppm

9. Physical And Chemical Properties

Appearance

Clear liquid.

Odor

Characteristic pungent odor.

Chemical Type: Mixture

Boiling Point: 173 °F 78.5 °C

Specific Gravity: 1.153 @ 67F / 20C

Percent Volatiles: ~95

Vapor Pressure: 40 mbar @ 67F/20C

Viscosity: <20 mPas @ 20C

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10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will Not Occur

Incompatible Materials

Can react with strong oxidizers.

Hazardous Decomposition Products

May emit toxic combustion products of unknown identity when burned.

11. Toxicological Information

Eye Effects

Contact of formic acid or resorcinol with eyes causes severe burning.

Skin Effects

Formic acid may irritate and damage skin. Resorcinol may be fatal if absorbed through the skin.

Acute Oral Effects

Swallowing formic acid has caused a number of cases of severe poisoning and death. The symptoms include: vomiting, salivation, hemorrhaging, diarrhea and pain. In severe poisoning, shock may occur. Later breathing difficulties may develop. Resorcinol may be fatal if swallowed.

Acute Inhalation Effects

Gaseous formic acid or resorcinol may be poisonous if inhaled.

Chronic/Carcinogenicity

Resorcinol is listed as an IARC Group 3 Carcinogen - A chemical, industrial process, or occupational exposure that cannot be classified as to its carcinogenicity in humans due to limited or inadequate human & animal data.

Carcinogenicity Indicators

IARC Carcinogen

Reproductive Effects

Ingestion of Ethyl Alcohol by pregnant women may cause nervous and immune system impairment in unborn children.

Miscellaneous Toxicological Information

The health effects of this product as noted above are based on extrapolations from the available data for the pure components. To the best of our knowledge, adverse health effects have not been determined for the final VAS 3 product formulation as a whole. Under the normal anticipated conditions of use of this product (in small quantities and for brief and intermittent exposures) it is believed that the likelihood of experiencing adverse health is small.

Ingredient(s) - Carcinogenicity

RESORCINOL

Listed In The IARC Monographs

12. Ecological Information

Other Environmental Information

None of the ingredients of this product are currently subject to reporting under SARA Title III, Section 313 Toxic Chemical Release reporting requirements.

13. Disposal Considerations

Flash point is below 140°F. Spilled material should be disposed of as an ignitable hazardous waste (EPA-RCRA), via incineration or solidification and disposal in an approved secure landfill; label as D001.

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14. Transport Information

Proper Shipping Name

Flammable liquid, corrosive, n.o.s.

Hazard Class

3, PGII

Secondary Hazard Class

8

DOT Identification Number

UN2924

DOT Shipping Label

FLAMMABLE LIQUID, CORROSIVE

Packaging Requirements

173.202

Additional Shipping Paper Description

flammable liquid, corrosive, n.o.s., 3, UN2924, II, (formic acid, ethanol)
 International Air Transport Association (IATA) packing instruction Y309, (packing group II).
 Product shipped in glass bottles (10g or 50g) within expanded plastic boxes.
 Meets the DOT small quantity exception when the conditions of 49 CFR 173.4 are met.
 Germany: "ArbStoffV" danger symbol "F" and "C".

DOT (Pictograms)



TDG - Canada (Pictograms)



15. Regulatory Information

SARA Hazard Classes

Acute Health Hazard
 Chronic Health Hazard
 Fire Hazard

SARA Title III - Section 313 Supplier Notification

This product contains the following toxic chemicals that are subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

FORMIC ACID (64-18-6) 66.7 %

This information must be included on all MSDSs that are copied and distributed for this material.

Ingredient(s) - U.S. Regulatory Information

FORMIC ACID
 SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

State Regulations

"Universal" labeling:
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15. Regulatory Information - Continued

State Regulations - Continued

Ethyl Alcohol 64-17-5
Formic Acid 64-18-6
Resorcinol 108-46-3

Ingredient(s) - State Regulations

ETHANOL

New Jersey - Workplace Hazard
New Jersey - Special Hazard
Pennsylvania - Workplace Hazard
California - Proposition 65
Massachusetts - Hazardous Substance
New York City - Hazardous Substance

FORMIC ACID

New Jersey - Workplace Hazard
New Jersey - Environmental Hazard
New Jersey - Special Hazard
Pennsylvania - Workplace Hazard
Pennsylvania - Environmental Hazard
Massachusetts - Hazardous Substance
New York City - Hazardous Substance

RESORCINOL

New Jersey - Workplace Hazard
Pennsylvania - Workplace Hazard
Pennsylvania - Environmental Hazard
Massachusetts - Hazardous Substance
New York City - Hazardous Substance

Canadian Regulatory Information

Class B - Combustible or Flammable Material
Class E - Corrosive Material

Ingredient(s) - Canadian Regulatory Information

ETHANOL

WHMIS - Ingredient Disclosure List

FORMIC ACID

WHMIS - Ingredient Disclosure List

RESORCINOL

WHMIS - Ingredient Disclosure List

European Union (EU) Regulatory Information

European Union Risk Phrases -

R11 - Highly flammable
R34 - Causes burns
R36/37 - Irritating to eyes and respiratory system

European Union Safety Phrases -

S9 - Keep container in a well-ventilated place
S24/25 - Avoid contact with skin and eyes
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28 - After contact with skin, wash immediately with plenty of water
S36/37/39 - Wear suitable protective clothing, gloves, and eye/face protection

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WHMIS - Canada (Pictograms)



DSCL - Europe (Pictograms)



16. Other Information

HMIS Rating

Health: 3

Fire: 3

Reactivity: 0

Personal Protection: C

Revision/Preparer Information

This MSDS Supersedes A Previous MSDS Dated: 11/19/2003

Reference Documentation

Primary references used in the creation of this document:

- (1) National Library of Medicine, HSDB database, 7/87, Bethesda MD.
- (2) NIOSH Registry Of Effects Of Chemical Substances (RTECS); U.S. Dept. HEW RTECS, ethanol, resorcinol, formic acid.
- (3) Siegling safety data sheet letter for VAS # Cement 7/17/87.
- (4) Guide to Occupational Exposure Values - 2006, ACGIH.
- (5) 29 CFR 1910 OSHA General industry standards 1910.1000 et.seq.
- (6) Patty's Industrial Hygiene And Toxicology 3rd. Ed. (1978) John Wiley & Sons, New York
- (7) 10th Annual Report On Carcinogens, Summary
- (8) Documentation Of The Threshold Limit Values And Biological Exposure Indices, 1996, ACGIH
- (9) IARC Monographs Supplement 7.

Other Information

Glossary -

ACGIH = American Conference of Governmental Industrial Hygienists

API = American Petroleum Institute

DOT = U.S. Department of Transportation

EPA = U.S. Environmental Protection Agency

IARC = International Agency For Research On Cancer

MSHA = Mine Safety and Health Administration

NFPA = National Fire Protection Association

NIOSH = National Institute of Occupational Safety and Health

NTP = National Toxicology Program

OSHA = U.S. Occupational Safety & Health Administration

PEL = Permissible Exposure Limit (OSHA)

REL = Recommended Exposure Limit (NIOSH)

STEL = Short-Term Exposure Limit

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average (8 hr.)

WHMIS = Canadian Workplace Hazardous Materials Information System

AP = approximately < = Less than > = Greater than

N/A = Not Applicable NE = Not Established ND = Not Determined

MATERIAL SAFETY DATA SHEET

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Disclaimer

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Siegling America, Inc.