



# SAFETY DATA SHEET

This safety data sheet complies with the requirements of: 29CFR1910.1200

**Issue Date** 11-May-2015

**Revision Date** 27-May-2015

**Version** 1

**Product identifier**

**Product Name** Form Tie Cement

**Other means of identification**

**Product Code** LUCAS 274

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Foundation coating. Heavy bodied asphaltic compound used for sealing burial vaults. Can also be used for sealing cracks in other concrete products.

**Uses advised against** For exterior use only. Do not use indoors.

**Details of the supplier of the safety data sheet**

**Manufacturer Address** R.M. Lucas Company  
3211 South Wood Street  
Chicago, Illinois 60608  
(773) 523-4300

**Emergency telephone number**

**Emergency Telephone** Call CHEMTREC Day or Night:  
Within USA and Canada: 1-800 424-9300  
Outside USA and Canada: 1-703-527-3887

## 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**

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

Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1
Flammable liquids	Category 3

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**  
 May cause cancer  
 Causes damage to organs through prolonged or repeated exposure  
 May be fatal if swallowed and enters airways  
 Flammable liquid and vapor

**Appearance** Thick mastic**Physical state** Liquid**Odor** Solvent (Mineral Spirits)**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Keep away from heat/sparks/open flames/hot surfaces.  
 Keep container tightly closed when product is not in use.  
 Ground/bond container and receiving equipment  
 Use explosion-proof electrical/ventilating/lighting/equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do NOT induce vomiting  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Disposal should be in accordance with applicable local, regional, national and international laws and regulations.

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

• May be harmful in contact with skin  
 Unknown acute toxicity 15.78565% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance****Mixture**

This product is a mixture.  
 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Common name** Flashing Cement.  
**Synonyms** None.  
**Chemical nature** Organic solvents and additives.

Chemical Name	CAS No.	Weight-%	Trade Secret
Asphalt (at Ambient Temperature)	8052-42-4	50 - 60%	*
Mineral Spirits (with < 0.1% Benzene)	8052-41-3	20 - 30%	*
Hydrated Aluminum-Magnesium Silicate (Attapulgite)	12174-11-7	10 - 20%	*
Cellulose Fiber	9004-34-6	0 - 10%	*
Alkyl Amine Acetate	28701-67-9	0 - 10%	*
Nonane	111-84-2	0 - 10%	*
Kaolin	1332-58-7	0 - 10%	*
Quartz	14808-60-7	0 - 10%	*

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	Contains petroleum distillate. Harmful or fatal if swallowed. Vapor harmful. May affect the brain or central nervous system causing dizziness, headache, or nausea. Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.
<b>Eye contact</b>	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
<b>Skin contact</b>	Wash thoroughly with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.
<b>Inhalation</b>	Move to fresh air in case of accidental inhalation of vapors. If continued difficulty with breathing is experienced, get medical attention immediately.
<b>Ingestion</b>	Not an expected route of exposure. If swallowed, do not induce vomiting. Get medical attention immediately.
<b>Self-protection of the first aider</b>	First aider: Pay attention to self-protection!

##### Most important symptoms and effects, both acute and delayed

**Symptoms** May cause skin irritation. May cause eye irritation.

##### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical. Carbon dioxide (CO<sub>2</sub>). Sand. Use foam or water FOG as a last resort.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

##### Specific hazards arising from the chemical

Sealed container may rupture/burst when heated or exposed to excessive heat.

**Hazardous combustion products** Thermal decomposition (burning) may release irritating, corrosive and/or toxic gases, vapors and fumes.

##### Explosion data

**Sensitivity to Mechanical Impact** Not sensitive.

**Sensitivity to Static Discharge** May be ignited by heat, sparks or flames.

##### 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.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

**Personal precautions** No action should be taken involving any personal risk or without suitable training. Use personal protective equipment as required.

**Other Information** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).

**For emergency responders** Use personal protection recommended in Section 8.

### Environmental precautions

**Environmental precautions** Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering sewers, drains, or waterways. Local authorities should be advised if significant spillages can not be contained. See Section 12 for additional ecological information.

### Methods and material for containment and cleaning up

**Methods for containment** Contain spillage with non-combustible absorbent material, e.g. sand, earth, diatomaceous earth, vermiculite.

**Methods for cleaning up** Pick up the absorbed material (described just above) and transfer to properly labeled containers for disposal according to local / national regulations (see Section 13).

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Use personal protective equipment as required. Remove all sources of ignition. Use only outdoors.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a cool, dry, well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition.

**Incompatible materials** Strong acids. Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** No ACGIH or OSHA PEL is assigned to this mixture. Exposure limits for the component materials are shown below. This product, as supplied, is not believed to contain any hazardous material that exceeds exposure limits established by OSHA.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Asphalt (at Ambient Temperature) 8052-42-4	TWA: 0.5 mg/m <sup>3</sup> benzene soluble aerosol fume, inhalable fraction	-	Ceiling: 5 mg/m <sup>3</sup> fume 15 min
Mineral Spirits (with < 0.1% Benzene) 8052-41-3	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m <sup>3</sup>	IDLH: 20000 mg/m <sup>3</sup> Ceiling: 1800 mg/m <sup>3</sup> 15 min TWA: 350 mg/m <sup>3</sup>
Hydrated Aluminum-Magnesium Silicate (Attapulgite) 12174-11-7	TWA: 1 mg/m <sup>3</sup> respirable fraction	-	-
Cellulose Fiber 9004-34-6	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> (vacated) STEL: 10 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Nonane 111-84-2	TWA: 200 ppm	(vacated) TWA: 200 ppm (vacated) TWA: 1050 mg/m <sup>3</sup>	TWA: 200 ppm TWA: 1050 mg/m <sup>3</sup>
Kaolin 1332-58-7	TWA: 2 mg/m <sup>3</sup> particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust

Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable fraction	(vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust : (30)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA total dust : (250)/(%SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust
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**Appropriate engineering controls**

**Engineering Controls** Use natural cross ventilation, local (mechanical) pick-up, and/or general area mechanical cross ventilation. Ventilation pattern should be designed to prevent accumulation of asphalt vapors. Ventilation must be sufficient to maintain asphalt vapor concentrations below the TWA limits outlined above.

**Individual protection measures, such as personal protective equipment**

- Eye/face protection** Wear safety glasses with side shields (or goggles).
- Skin and body protection** Wear protective gloves and protective clothing that is resistant to chemical penetration.
- Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, a NIOSH/MSHA approved respiratory protection should be worn.

**General Hygiene Considerations** Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

<p><b>Physical state</b> Liquid  <b>Appearance</b> Thick mastic  <b>Color</b> Black</p>	<p><b>Odor</b> Solvent (Mineral Spirits)  <b>Odor threshold</b> 1-30 PPM. Odor thresholds vary greatly. Do not rely on odor threshold alone to determine potentially hazardous substances.</p>
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<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	Not applicable	
<b>Melting point/freezing point</b>	None / -70 °C None / -94 °F	Melting Point is not applicable. Freezing points are shown.
<b>Boiling point / boiling range</b>	> 154 °C / 310 °F	
<b>Flash point</b>	> 40.5 °C / > 105 °F	Setaflash
<b>Evaporation rate</b>	0.1	Butly acetate = 1
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		Flammable above 105 degrees F and 40.5 degrees C.
<b>Upper flammability limit:</b>	7.0	
<b>Lower flammability limit:</b>	1.6	
<b>Vapor pressure</b>	0.3 (kPa)	@ 20 °C
<b>Vapor density</b>	5.3	Where: Air = 1 at 68 degrees F (20 degrees C)
<b>Specific Gravity</b>	1.13	Water = 1g/ml
<b>Water solubility</b>	Insoluble	
<b>Solubility in other solvents</b>	Soluble in aromatic and aliphatic solvents.	
<b>Partition coefficient</b>	No information available	No data available.
<b>Autoignition temperature</b>	330 °C / 626 °F	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	

**Dynamic viscosity** No information available  
**Explosive properties** Vapor accumulation could flash or explode if ignited.  
**Oxidizing properties** None

**Other Information**

**Softening point** Not applicable  
**Molecular weight** No information available  
**VOC Content (%)** Less than 250 g/l.  
**Density** 9.2 to 9.6 lb/gal  
**Bulk density** Not applicable

**10. STABILITY AND REACTIVITY****Reactivity**

Not applicable Not applicable

**Chemical stability**

Stable.

**Possibility of Hazardous Reactions**

None under normal use.

**Hazardous polymerization** Hazardous polymerization does not occur.

**Conditions to avoid**

Avoid static discharge. Avoid heat, sparks, and open flame.

**Incompatible materials**

Strong acids. Strong oxidizing agents.

**Hazardous Decomposition Products**

Combustion may produce carbon monoxide, carbon dioxide, and other asphyxiants.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information**

Toxicological testing has not been conducted for this product overall. Available toxicological data for individual ingredients are summarized below.

**Inhalation**

Avoid breathing vapors or mists.

**Eye contact**

Avoid contact with eyes. Contact with eyes may cause irritation.

**Skin contact**

May cause irritation.

**Ingestion**

If swallowed, do not induce vomiting. Get medical attention immediately. Not an expected route of exposure.

**Component Information**

\* The IARC Monograph (Vol. 103, 2013, Bitumen and Bitumen Emissions) defines Asphalt as 'Group 2B, Possible Carcinogen to Humans'. This definition is based on studies of exposure to Asphalt fumes at elevated temperatures. The Monograph states that temperature plays an important role in determining the degree of exposure and also the carcinogenic potential of bitumen emissions. This same Monograph states that Asphalt is non volatile at ambient temperature. There is no data presented in the Monograph to demonstrate that Asphalt at ambient temperature is considered a carcinogen. Since the normal use of this product is at ambient temperature, the Asphalt used in this product is not listed as a carcinogen. No other national or international agency has defined Asphalt as a carcinogen.

\* No significant exposure to Crystalline Silica (Quartz) is thought to occur during the use of products in which Crystalline Silica (Quartz) is bound to other materials, such as in paints and coatings. As one reference, see California Office of Health Hazard Assessment at: [http://www.oehha.org/prop65/CRNR\\_notices/safe\\_use/sylicasud2.html](http://www.oehha.org/prop65/CRNR_notices/safe_use/sylicasud2.html)

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Asphalt (at Ambient Temperature) 8052-42-4	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	-
Cellulose Fiber 9004-34-6	> 5 g/kg ( Rat )	> 2 g/kg ( Rabbit )	> 5800 mg/m <sup>3</sup> ( Rat ) 4 h
Nonane 111-84-2	-	-	= 3200 ppm ( Rat ) 4 h
Quartz 14808-60-7	= 500 mg/kg ( Rat )	-	-

**Information on toxicological effects**

**Symptoms** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Can cause skin irritation.  
**Serious eye damage/eye irritation** Irritating to eyes.  
**Irritation** Irritating to eyes, respiratory system and skin.  
**Corrosivity** Not classified.  
**Sensitization** May cause sensitization of susceptible persons.  
**Germ cell mutagenicity** This product does not contain any ingredients that cause germ cell mutagenicity.  
**Carcinogenicity** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrated Aluminum-Magnesium Silicate (Attapulgate) 12174-11-7	-	Group 2B Group 3	-	X
Quartz 14808-60-7	A2	Group 1	Known	X

**Legend**

ACGIH (American Conference of Governmental Industrial Hygienists)  
A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen  
A4 - Not Classifiable as a Human Carcinogen  
IARC (International Agency for Research on Cancer)  
Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans  
Group 3 - Not classifiable as a human carcinogen.  
NTP (National Toxicology Program)  
Known - Known Carcinogen  
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
X - Present

**Reproductive toxicity** None known.  
**Developmental Toxicity** None known.  
**Teratogenicity** None known.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

**Numerical measures of toxicity - No information available**

The following values are calculated based on chapter 3.1 of the GHS document For exterior use only. Do not use indoors.

ATEmix (oral) 7,169.00  
ATEmix (dermal) 2,868.00

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

This mixture contains no known hazards to the aquatic environment.

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

Chemical Name	Partition coefficient
Asphalt (at Ambient Temperature) 8052-42-4	6

**Other adverse effects** No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable local, regional, national and international laws and regulations.

**Contaminated packaging** Do not reuse container.

**14. TRANSPORT INFORMATION**

**DOT** Regulated  
 DOT Ground: Not regulated if shipped in containers < 119 gallons (450 liters).  
 DOT Ground: Regulated if shipped in containers >119 gallons (450 liters).

**Proper shipping name** Combustible liquid, n.o.s (mineral spirits)  
**Hazard Class** 3  
**Packing Group** III

**TDG**  
**UN/ID no.** NA 1993  
**Proper shipping name** Combustible liquid, n.o.s (mineral spirits)  
**Hazard Class** 3  
**Packing Group** III

**MEX** Regulated  
**UN/ID no.** NA 1993  
**Proper shipping name** Combustible liquid, n.o.s. (mineral spirits)

**ICAO (air)** Regulated  
**UN/ID no.** 1993

**IATA** Regulated  
**UN/ID no.** 1993

**IMDG** Regulated  
**UN/ID no.** 1993

**RID** Not applicable in the United States.

**ADR** Not applicable in the United States.



**ADN** Not applicable in the United States.

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** All of the components of this product are listed on the US TSCA (Toxic Substances Control Act) Inventory or are exempt.  
**DSL/NDSL** All of the components of this product are listed on the DSL.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

**Acute health hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire hazard** Yes  
**Sudden release of pressure hazard** No  
**Reactive Hazard** No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Hydrated Aluminum-Magnesium Silicate (Attapulgite) - 12174-11-7	Carcinogen
Quartz - 14808-60-7	Carcinogen

**U.S. State Right-to-Know Regulations**

This product contains the following substances regulated by various State Right-to-Know regulations.

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Asphalt (at Ambient Temperature) 8052-42-4	X	X	X
Mineral Spirits (with < 0.1% Benzene) 8052-41-3	X	X	X
Cellulose Fiber 9004-34-6	X	X	X
Nonane 111-84-2	X	X	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<b>NFPA</b>	Health hazards 2	Flammability 2	Instability 0	Physical and Chemical Properties -
<b>HMIS</b>	Health hazards 2	Flammability 2	Physical hazards 0	Personal protection -
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

**Prepared By** Prepared by Robert Barry  
**Issue Date** 11-May-2015  
**Revision Date** 27-May-2015  
**Revision Note**

Version #1 was not released for public distribution. Version #1 was a test/working document.

**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.

**End of Safety Data Sheet**