

LUCAS

Professional Coatings, Adhesives & Sealants

SAFETY DATA SHEET

Issue Date 11-May-2015

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Version 3

Product Name LUCAS 441

Product Code LUCAS 441

Recommended Use An asphalt sealer that fills hairline cracks and provides a protective coating to asphalt driveway surfaces.

Synonyms None

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

Company Phone Number (214) 254-4720

Emergency Telephone Call CHEMTREC Day or Night:
Within USA and Canada: 1-800 424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

Contains a known or suspected carcinogen

Appearance Viscous

Physical state Liquid.

Odor Low

Potential health effects

Acute toxicity

Eyes

May cause slight irritation

Skin

No known effect based on information supplied

Inhalation

No known effect based on information supplied

Ingestion

No known effect based on information supplied

Chronic Effects

No known effect based on information supplied

Aggravated Medical Conditions

None known for product as a whole.

Environmental hazard

See Section 12: ECOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Common name

Asphalt Emulsion Driveway Sealer.

4. FIRST AID MEASURES

General advice

Under conditions of normal use, no hazards are anticipated which require special first aid measures.

Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice
Skin contact	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
Inhalation	Move to fresh air in case of accidental inhalation of vapors If continued difficulty with breathing is experienced, get medical attention immediately.
Ingestion	Not an expected route of exposure If swallowed, do not induce vomiting. Get medical attention immediately.
Note to physicians	Treat symptomatically
Self-protection of the first aider	First aider: Pay attention to self-protection!

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable
Flash point Method	Not determined Not applicable °F / Not applicable °C Non Flammable
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment Dry chemical Carbon dioxide (CO ₂) 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
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	Not sensitive
Specific hazards arising from the chemical	No information available
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

NFPA **Health hazards** 1 **Flammability** 0 **Stability** 0 **Physical and Chemical Properties** -

HMIS **Health hazards** 1 **Flammability** 0 **Physical hazards** 0 **Personal protection** -

6. ACCIDENTAL RELEASE MEASURES

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

Other Information Extremely slippery when spilled

7. HANDLING AND STORAGE

Advice on safe handling Use personal protective equipment as required Use only outdoors

Storage Conditions Keep from freezing Keep containers tightly closed in a cool, dry, well-ventilated place

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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 ³ benzene-soluble aerosol fume, inhalable particulate matter	-	Ceiling: 5 mg/m ³ fume 15 min
Calcium Carbonate 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Bentonite 1302-78-9	TWA: 1 mg/m ³ respirable particulate matter	-	-
Carbon Black 1333-86-4	TWA: 3 mg/m ³ inhalable particulate matter	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Engineering Controls None under normal outdoor use conditions

Personal Protective Equipment

Eye/face protection Wear safety glasses with side shields (or goggles)
Respiratory protection No protective equipment is needed under normal use conditions.

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

Physical state	Liquid	Odor	Low
Appearance	Viscous	Odor threshold	Negligible odor.
Color	Black		
Property	Values	Remarks • Method	
pH	Not applicable		
Melting point/freezing point	None / 0 °C None / 32 °F	Melting Point is not applicable. Freezing points are shown.	
Boiling point / boiling range	> >100 °C / >212 °F		
Flash point	Not applicable °C / Not applicable °F	Non Flammable	
Evaporation rate	The evaporation rate of the water component of this emulsion product is dependent upon: 1) The temperature of the water at the air-water surface; 2) The humidity of the air; 3) The area of the air-water surface; 4) The	No data available. Evaporation rate is dependent upon atmospheric conditions.	

	temperature of the air. No information available	
Flammability (solid, gas)	Non Flammable	Not flammable
Flammability Limit in Air		
Upper flammability limit:	Not applicable	
Lower flammability limit:	Not applicable	
Vapor pressure	2.33 (kPa)	@ 20 °C
Vapor density	5.3	Where: Air = 1 at 68 degrees F (20 degrees C)
Specific Gravity	1.18	Water = 1g/ml
Water solubility	Dispersible	
Solubility in other solvents	Soluble in aromatic and aliphatic solvents.	
Partition coefficient	No information available	No data available.
Autoignition temperature	N/A °C / N/A °F	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	None	

Other Information

Softening point	Not applicable
Molecular weight	No information available
VOC Content (%)	Less than 50 g/l
Density	No information available
Bulk density	Not applicable

10. STABILITY AND REACTIVITY

Stability	Stable
Incompatible materials	Strong acids Strong oxidizing agents
Conditions to avoid	None known for product as a whole.
Hazardous Decomposition Products	Combustion may produce carbon monoxide, carbon dioxide, and other asphyxiants.
Possibility of Hazardous Reactions	None under normal use.
Hazardous polymerization	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

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.

* The IARC Monograph (Vol 93, 2010, Carbon Black, Titanium Dioxide, Talc) states: "Operators in user industries who handle fluffy or pelleted Carbon Black during rubber, paint and ink production are expected to have significantly lower exposures to Carbon Black than workers in Carbon Black production. Other workers in user industries who handle it occasionally have little opportunity for exposure. And further... "End-users of these products (rubber, ink or paint) are unlikely to be exposed to airborne Carbon Black particles, which are bound within the product matrix."

** 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

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
Asphalt (at Ambient Temperature)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 94.4 mg/m ³ (Rat) 4.5 h
Bentonite	> 5000 mg/kg (Rat)	-	-
Carbon Black	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-

Chronic toxicity

Carcinogenicity

The table below indicates whether each agency (ACGIH, IARC, NTP, or OSHA) has listed any ingredient as a carcinogen

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

Sensitization

May cause sensitization of susceptible persons.

Germ cell mutagenicity

This product does not contain any ingredients that cause germ cell mutagenicity.

Reproductive toxicity

None known for product as a whole.

Developmental Toxicity

None known for product as a whole.

Teratogenicity

None known

Target Organ Effects

None known for product as a whole

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Bentonite	-	19000: 96 h Oncorhynchus mykiss mg/L LC50 static 8.0 - 19.0: 96 h Salmo gairdneri g/L LC50	-
Carbon Black	-	-	5600: 24 h Daphnia magna mg/L EC50

13. DISPOSAL CONSIDERATIONS

Contaminated packaging Do not reuse container

14. TRANSPORT INFORMATION

Note: This material is not subject to regulation as a hazardous material for shipping

DOT Not regulated.

TDG Not regulated.

MEX Not regulated.

ICAO (air) Not regulated.

IATA Not regulated.

IMDG Not regulated.

RID Not applicable in the United States. Not regulated.

ADR Not applicable in the United States. Not regulated.

ADN Not applicable in the United States. Not regulated.

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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	No
Fire hazard	No
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

U.S. State Right-to-Know Regulations

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

International Regulations

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class

D2A - Very toxic materials

Non-controlled

16. OTHER INFORMATION

Prepared By	Prepared by Adam Dunn
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Revision Note	No information available

End of Safety Data Sheet