

# Lucas Marine Fuel Treatment

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 04/27/2016 Version: 1.0



### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Identification

Product form : Mixture  
Product name : Lucas Marine Fuel Treatment  
Other means of identification : Part number: 10981

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Fuel Detergent and Lubricant

#### 1.3. Details of the supplier of the safety data sheet

Lucas Oil Products, Inc  
302 North Sheridan Street  
Corona, California 92880-2067 - USA  
T (951) 270-0154 - F (951) 270-1902  
[GHewgill@lucasoil.com](mailto:GHewgill@lucasoil.com) - [www.LucasOil.com](http://www.LucasOil.com)

#### 1.4. Emergency telephone number

Emergency number : (951) 493-1149 (951) 847-5949 7:00A.M. to 5:00P.M. Monday thru Friday

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flam. Liq. 4 H227 - Combustible liquid  
Eye Dam. 1 H318 - Causes serious eye damage  
Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger  
Hazard statements (GHS-US) : H227 - Combustible liquid  
H318 - Causes serious eye damage  
Precautionary statements (GHS-US) : P210 - Keep away from heat, sparks, open flames. - No smoking  
P280 - Wear eye protection, protective gloves, protective clothing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a doctor  
P370+P378 - In case of fire: Use carbon dioxide (CO2), Dry chemical, foam to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool  
P501 - Dispose of contents/container to an authorised waste collection point

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

16.49 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)  
16.49 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)  
16.49 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

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### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics	(CAS No) 64742-47-8	1 – 15	Flam. Liq. 4, H227 Asp. Tox. 1, H304
Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich	(CAS No) trade secret	1 – 15	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)		0.5 - 3	Aquatic Chronic 4, H413
Substituted carboxylic acid	(CAS No) unknown	0.1 - 1.5	Eye Irrit. 2A, H319 Aquatic Chronic 3, H412
Diphenylamine	(CAS No) 122-39-4	0.01 – 0.3	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Do NOT induce vomiting. Get medical advice/attention. Rinse mouth.

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

- Symptoms/injuries after inhalation : Inhalation of vapours may cause respiratory irritation.
- Symptoms/injuries after eye contact : Causes serious eye damage.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry chemical. Foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.
- Explosion hazard : May form flammable/explosive vapour-air mixture.
- Reactivity : No dangerous reactions known.

### 5.3. Advice for firefighters

- Firefighting instructions : Cool adjacent structures and containers with water spray to protect and prevent ignition. Do not allow run-off from fire fighting to enter drains or water courses.
- Protection during firefighting : Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

## SECTION 6: Accidental release measures

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

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Avoid all eye and skin contact and do not breathe vapour and mist.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.

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Emergency procedures : Ventilate area. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment. Do not discharge into drains or the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.

### 6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from Sources of ignition. - No smoking.

Precautions for safe handling : No open flames. No smoking. Avoid all eye and skin contact and do not breathe vapour and mist.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep in fireproof place. Keep container closed when not in use.

Incompatible products : Strong acids. Strong bases. Strong oxidizers.

Incompatible materials : Heat sources.

Heat and ignition sources : Keep away from heat, sparks and flame.

Prohibitions on mixed storage : Incompatible materials.

Storage area : Store in dry, cool, well-ventilated area.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Lucas Marine Fuel Treatment		
ACGIH	Not applicable	
OSHA	Not applicable	
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)		
ACGIH	Not applicable	
OSHA	Not applicable	
Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich (trade secret)		
ACGIH	Not applicable	
OSHA	Not applicable	
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)		
ACGIH	Not applicable	
OSHA	Not applicable	
Substituted carboxylic acid (unknown)		
ACGIH	Not applicable	
OSHA	Not applicable	
Diphenylamine (122-39-4)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
ACGIH	Remark (ACGIH)	Liver & kidney dam; hematologic eff
OSHA	Not applicable	

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### 8.2. Exposure controls

Appropriate engineering controls	: Avoid splashing. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Emergency safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear suitable gloves. nitrile rubber gloves.
Eye protection	: Chemical goggles or safety glasses. Face shield.
Skin and body protection	: Wear suitable protective clothing. Long sleeved protective clothing.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.
Environmental exposure controls	: Prevent leakage or spillage.
Consumer exposure controls	: Keep out of reach of children.
Other information	: Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light blue
Odour	: petroleum
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: $\geq 71.1$ °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: 0.857
Relative vapour density at 20 °C	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: 21 - 27 cSt @ 40 °C
Viscosity, dynamic	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known.

### 10.2. Chemical stability

Combustible liquid. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

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### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

### 10.6. Hazardous decomposition products

May release flammable gases. Carbon oxides (CO, CO<sub>2</sub>). Hydrocarbon.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)	
LD50 oral rat	> 15000 mg/kg
LD50 dermal rabbit	>= 3160 mg/kg

Diphenylamine (122-39-4)	
ATE US (oral)	100.000 mg/kg bodyweight
ATE US (dermal)	300.000 mg/kg bodyweight
ATE US (gases)	700.000 ppmv/4h
ATE US (vapours)	3.000 mg/l/4h
ATE US (dust,mist)	0.500 mg/l/4h

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Causes serious eye damage.  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)	
IARC group	Not listed in carcinogenicity class

Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : Not classified  
Specific target organ toxicity (repeated exposure) : Not classified  
Aspiration hazard : Not classified  
Symptoms/injuries after inhalation : Inhalation of vapours may cause respiratory irritation.  
Symptoms/injuries after eye contact : Causes serious eye damage.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)	
LC50 fish 1	> 1000 mg/l
EC50 Daphnia 1	> 1000 mg/l
NOEC chronic fish	0.173 mg/l Estimated. Based on growth.

Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich (trade secret)	
LC50 fish 1	3.8 mg/l Fathead minnow 96 h
LC50 fish 2	3.3 mg/l Rainbow trout 96 h

Diphenylamine (122-39-4)	
LC50 fish 1	4.14 ppm
EC50 Daphnia 1	2.46 mg/l
EC50 other aquatic organisms 1	0.36 mg/l

### 12.2. Persistence and degradability

Lucas Marine Fuel Treatment	
Persistence and degradability	May cause long-term adverse effects in the environment.

Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)	
Biodegradation	69 % 28 days

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Diphenylamine (122-39-4)	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

Diphenylamine (122-39-4)	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

Lucas Marine Fuel Treatment	
Ecology - soil	No additional information available.

### 12.5. Other adverse effects

Other information : No additional information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not pierce or burn, even after use.  
Additional information : Handle empty containers with care because residual vapours are flammable.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : NA1993 Combustible liquid, n.o.s. (Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics), 3, III

UN-No.(DOT) : NA1993

Proper Shipping Name (DOT) : Combustible liquid, n.o.s.  
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics

Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)  
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / (1 + a (tr - tf))$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel

Emergency Response Guide (ERG) Number : 128

Other information : No supplementary information available.

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### TDG

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Diphenylamine (122-39-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)

Listed on the Canadian DSL (Domestic Substances List) inventory

#### Diphenylamine (122-39-4)

Listed on the Canadian DSL (Domestic Substances List) inventory

#### EU-Regulations

#### Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Diphenylamine (122-39-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclic, <2% aromatics (64742-47-8)

Listed on the Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECI (Korean Existing Chemicals Inventory)  
Listed on Taiwan National Chemical Inventory  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on NZIoC (New Zealand Inventory of Chemicals)

#### Diphenylamine (122-39-4)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECI (Korean Existing Chemicals Inventory)  
Listed on Taiwan National Chemical Inventory  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on NZIoC (New Zealand Inventory of Chemicals)

### 15.3. US State regulations

#### Diphenylamine (122-39-4)

U.S. - Minnesota - Hazardous Substance List  
U.S. - New Jersey - Right to Know Hazardous Substance List

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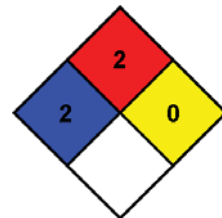
### SECTION 16: Other information

- Data sources : Component Supplier SDSs.  
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.  
European Chemicals Agency (ECHA) Registered Substances list.  
European Standards: Personal Protective Equipment; accessed at: [http://ec.europa.eu/enterprise/policies/european-standards/harmonised-standards/personal-protective-equipment/index\\_en.htm](http://ec.europa.eu/enterprise/policies/european-standards/harmonised-standards/personal-protective-equipment/index_en.htm).  
Internal Company test data.  
Kriester Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
- Abbreviations and acronyms : ATE: Acute Toxicity Estimate.  
CAS (Chemical Abstracts Service) number.  
CLP: Classification, Labelling, Packaging.  
EC50: Environmental Concentration associated with a response by 50% of the test population.  
GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).  
LD50: Lethal Dose for 50% of the test population.  
STEL: Short Term Exposure Limits.  
WEL: Workplace Exposure Limit.
- Other information : None.

#### Full text of H-statements:

H227	Combustible liquid
H301	Toxic if swallowed
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

- NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Redstone SDS US GHS for Lucas Oil

**SDS Prepared by:** The Redstone Group, LLC.  
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Suite 206  
Dublin, Ohio, USA 43016  
614.923.7472  
[www.redstonegrp.com](http://www.redstonegrp.com)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*