



# SAFETY DATA SHEET

## 529 Ecoshield™ Biodegradable Grease NLGI 2

### Section 1. Identification

**GHS product identifier** : 529 Ecoshield™ Biodegradable Grease NLGI 2

**Other means of identification** : Not available.

**Product type** : Liquid.

**Identified uses**

Biodegradable extreme pressure lubricating grease.

**Supplier's details** : Schaeffer Mfg. Company  
 102 Barton Street  
 Saint Louis, Missouri 63104  
 Tel: 314-865-4100  
 Fax: 314-865-4107  
 Toll Free: 1-800-325-9962  
 E-Mail: [safety@schaefferoil.com](mailto:safety@schaefferoil.com)  
 Web: <http://www.schaefferoil.com>

**Emergency telephone number (with hours of operation)** : +1 314 865-4105 (24-hour response number)

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : SKIN SENSITIZATION - Category 1  
 CARCINOGENICITY - Category 1A

**GHS label elements**

**Hazard pictograms**



**Signal word** : Danger

**Hazard statements** : May cause an allergic skin reaction.  
 May cause cancer.

**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. Wear protective gloves. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.

**Response** : IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

**Storage** : Not applicable.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Propylene carbonate	1 - 5	108-32-7
Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	0.1 - 1	125643-61-0
Pentene, 2,4,4-trimethyl-, sulfurized	0.1 - 1	68515-88-8
Crystalline silica, quartz	0.1 - 1	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No known significant effects or critical hazards.

### Indication of immediate medical attention and special treatment needed, if necessary

## Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**Special protective actions for fire-fighters** : No special measures are required.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to all applicable Federal, State, Provincial and local authorities and/or the United States National Response Center at (800) 424-8802 as appropriate or required.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Crystalline silica, quartz	<b>OSHA PEL Z3 (United States, 2/2013).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Respirable TWA: 250 mppcf 8 hours. Form: Respirable <b>NIOSH REL (United States, 10/2013).</b> TWA: 0.05 mg/m <sup>3</sup> 10 hours. Form: Respirable dust <b>ACGIH TLV (United States, 4/2014).</b> TWA: 0.025 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.
- Skin protection**
- Hand protection** : Use nitrile or oil resistant gloves.
- Body protection** : Personal protective clothing such as gloves, aprons, boots and complete facial protection should be selected based on the task being performed and the risks involved. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
- Respiratory protection** : If a risk assessment indicates that respiratory protection is required, use a properly fitted, air-purifying or supplied air respirator that complies with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Semi-solid. Grease.
- Color** : Tan.
- Odor** : Petroleum. [Slight]
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/ Dropping Point** : Not available.
- Boiling point** : >300°C (>572°F)
- Flash point** : Open cup: 251°C (483.8°F) [Cleveland.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : >1 [Air = 1]
- Relative density** : 0.99
- Solubility** : Negligible in water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: Strong acids, bases and oxidizers.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Propylene carbonate	LD50 Oral	Rat	>5000 mg/kg	-
Pentene, 2,4,4-trimethyl-, sulfurized	LC50 Inhalation Vapor	Rat	2170 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	3641 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Propylene carbonate	Eyes - Moderate irritant	Rabbit	-	60 mg	-
	Skin - Moderate irritant	Human	-	72 hours 100 mg Intermittent	-
Pentene, 2,4,4-trimethyl-, sulfurized	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 µL	-

#### Sensitization

There is no data available.

#### Carcinogenicity

There is no data available.

#### Specific target organ toxicity (single exposure)

There is no data available.

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Crystalline silica, quartz	Category 1	Inhalation	kidneys, respiratory tract and testes

#### Aspiration hazard

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

#### Potential acute health effects

<b>Eye contact</b>	: No known significant effects or critical hazards.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: May cause an allergic skin reaction.
<b>Ingestion</b>	: No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No known significant effects or critical hazards.

## Section 11. Toxicological information

- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No known significant effects or critical hazards.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

#### Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

#### Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

There is no data available.

## Section 12. Ecological information

### Toxicity

There is no data available.

### Persistence and degradability

There is no data available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Propylene carbonate Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	-0.41 9.2	- 260	low low

### Mobility in soil

- Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

- Other adverse effects** : No known significant effects or critical hazards.



## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	Not regulated.	-	-	-		-
<b>IMDG Class</b>	Not regulated.	-	-	-		-
<b>IATA-DGR Class</b>	Not regulated.	-	-	-		-

PG\* : Packing group

**AERG** : Not applicable

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are listed or exempted.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.



## Section 15. Regulatory information

### SARA 311/312

**Classification** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Propylene carbonate	1 - 5	No.	No.	No.	Yes.	No.
Pentene, 2,4,4-trimethyl-, sulfurized	0.1 - 1	No.	No.	No.	Yes.	No.
Crystalline silica, quartz	0.1 - 1	No.	No.	No.	No.	Yes.

No products were found.

### State regulations

**Massachusetts** : None of the components are listed.  
**New York** : None of the components are listed.  
**New Jersey** : The following components are listed: Crystalline silica, quartz  
**Pennsylvania** : The following components are listed: Crystalline silica, quartz

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Crystalline silica, quartz	Yes.	No.	No.	No.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

**Health** : 1    **Flammability** : 0    **Physical hazards** : 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller.

The customer is responsible for determining the PPE code for this material.

### National Fire Protection Association (U.S.A.)

**Health** : 1    **Flammability** : 0    **Instability** : 0

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**US Tariff Heading Number** : 3403.19.0000

**Schedule B Code** : 3403.19.0000

### History

**Date of issue mm/dd/yyyy** : 04/15/2015

**Version** : 1

**Section 16. Other information**

- Revised Section(s)** : Not applicable.
- Prepared by** : KMK Regulatory Services Inc.

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