

## UltraSil 4513

<b>1.</b>	<b>Substance, Preparation, and Company Description</b>	
	<b>Material Uses</b>	Lubricant, Grease, Industrial applications
	<b>Manufacturer</b>	Engineered Custom Lubricants (ECL) 3851 Exchange Ave. Aurora, IL 60504 630-449-5000
	<b>Product Code</b>	UltraSil 4513
	<b>Validation Date</b>	February 3, 2015
	<b>In case of emergency contact</b>	1-630-449-5000
<b>2.</b>	<b>Hazards Identification</b>	
	<b>Emergency Overview</b>	
	<b>Physical State</b>	Semi-solid, grease
	<b>Color</b>	Off-white
	<b>Odor</b>	Nearly odorless
	<b>Hazard Statements</b>	NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
	<b>OSHA/HCS Status</b>	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.
	<b>Routes of Entry</b>	Dermal contact. Eye contact. Ingestion
	<b>Potential acute health effects</b>	
	<b>Inhalation</b>	No known significant effects or critical hazards.
	<b>Ingestion</b>	No known significant effects or critical hazards.
	<b>Skin</b>	No known significant effects or critical hazards.
	<b>Eyes</b>	No known significant effects or critical hazards.
	<b>Potential chronic health effects</b>	
	<b>Chronic effects</b>	No known significant effects or critical hazards.
	<b>Carcinogenicity</b>	No known significant effects or critical hazards.
	<b>Mutagenicity</b>	No known significant effects or critical hazards.
	<b>Teratogenicity</b>	No known significant effects or critical hazards.
	<b>Fertility effects</b>	No known significant effects or critical hazards.
	<b>Developmental effects</b>	No known significant effects or critical hazards.
	<b>Over-exposure signs/symptoms</b>	
	<b>Inhalation</b>	No specific data
	<b>Ingestion</b>	No specific data

	<b>Skin</b>	No specific data																	
	<b>Eyes</b>	No specific data																	
	<b>Medical conditions aggravated by over-exposure</b>	None known																	
<b>3.</b>	<b>Composition/Component Data</b>																		
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	No Hazardous or Reportable Ingredients																		
<b>4.</b>	<b>First Aid Measures</b>																		
	<b>Eye Contact</b>	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.																	
	<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.																	
	<b>Inhalation</b>	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt, or waistband. Get medical attention if symptoms occur.																	
	<b>Ingestion</b>	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.																	
	<b>Protection for first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.																	
	<b>Note to Physician</b>	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.																	
<b>5.</b>	<b>Firefighting Measures</b>																		
	<b>Suitable Extinguishing Media</b>	Dry Chemical, CO <sub>2</sub> , Foam. or Water Fog																	
	<b>Special Exposure Hazards</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.																	
	<b>Hazardous thermal decomposition products</b>	Burning may produce carbon monoxide, carbon dioxide, formaldehyde, as well as small amounts of other toxic fumes.																	
	<b>Special protective equipment for firefighters</b>	Fire-fighters should wear protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.																	
<b>6.</b>	<b>Accidental Release Measures</b>																		
	<b>Personal Precautions</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protection equipment (see Section 8).																	
	<b>Environmental Precautions</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).																	

	<b>Methods for Clean up</b>	<p><b>Small spill:</b> Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.</p> <p><b>Large spill:</b> Move containers from spill area. Prevent entry into sewers, water courses, basements, or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.</p> <p>Note: See section 1 for emergency contact information and section 13 for waste disposal.</p>
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**7. Handling and Storage**

	<b>Handling</b>	Put on appropriate personal protection equipment (see section 8). 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. Remove contaminated clothing and protective equipment before entering eating areas.
	<b>Storage</b>	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. 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.

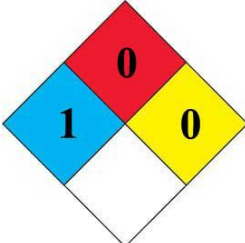
**8. Exposure Limits and Personal Protective Equipment**

<b>United States</b>				
<b>Occupational Exposure Limits</b>				
<b>Ingredient</b>	<b>Exposure Limits</b>			
<b>Canada</b>				
<b>Occupational Exposure Limits</b>				
<b>Ingredient</b>	<b>List Name</b>	<b>TWA (8 Hours)</b>	<b>STEL (15 mins)</b>	<b>Ceiling</b>
<b>Mexico</b>				
<b>Occupational Exposure Limits</b>				
<b>Ingredient</b>	<b>Exposure Limits</b>			
<b>Recommended Monitoring Procedures</b>	If this product contains ingredients with exposure limits, personal, workplace, atmosphere, or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.			
<b>Engineering Measures</b>	No specific ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.			

	<b>Hygiene Measures</b>	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking or using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
	<b>Personal Protection</b>	
	<b>Respiratory</b>	Use properly fitted, air-purifying or air fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.
	<b>Hands</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
	<b>Eyes</b>	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposures to liquid splashes, mists, or dusts.
	<b>Skin</b>	Personal protection equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
	<b>Environmental Exposure Controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements or environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
<b>9.</b>	<b><i>Physical and Chemical Properties</i></b>	
	<b>Physical State</b>	Semi-solid, grease
	<b>Flash Point</b>	Not Available
	<b>Auto-ignition Temperature</b>	Not Available
	<b>Flammable Limits</b>	Not Available
	<b>Color</b>	Off-white
	<b>Odor</b>	Nearly odorless
	<b>pH</b>	Not Available
	<b>Boiling/condensation Point</b>	Not Available
	<b>Melting/freezing Point</b>	Not Available
	<b>Density</b>	1.0 g/cm <sup>3</sup>
	<b>Vapor Pressure</b>	Not Available
	<b>Vapor Density</b>	Not Available
	<b>Volatility</b>	Not Available
	<b>Evaporation Data</b>	Not Available
	<b>Viscosity</b>	Not Available
	<b>Dispensability Properties</b>	Not Available
	<b>Solubility</b>	Insoluble in the following materials: hot and cold water
	<b>Physical/chemical Properties Comments</b>	Not Available
<b>10.</b>	<b><i>Stability and reactivity</i></b>	
	<b>Chemical Stability</b>	The product is stable
	<b>Conditions to avoid</b>	No specific data
	<b>Incompatible Materials</b>	No specific data
	<b>Hazardous Decomposition Products</b>	Under normal conditions of storage and use, hazardous decomposition product should not be produced.
	<b>Possibility of Hazardous Reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.

<b>11.</b>	<b>Toxicological Data</b>				
	Acute Toxicity: None known				
	<b>United States</b>				
	<b>Product/Ingredient Name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
	<b>Canada</b>				
	<b>Product/Ingredient Name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
	<b>Mexico</b>				
	<b>Product/Ingredient Name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
	<b>Chronic Toxicity</b>	Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation.			
	<b>Irritation/Corrosion</b>	<b>Skin:</b> No known significant effects or critical hazards. <b>Eyes:</b> No known significant effects or critical hazards. <b>Respiratory:</b> Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation.			
	<b>Sensitizer</b>	<b>Skin:</b> No specific information is available regarding the skin sensitizing properties of this product. Sensitization not expected for humans. <b>Respiratory:</b> Sensitization not expected for humans.			
	<b>Carcinogenicity</b>	There is no data on the preparation itself. Carcinogenicity not suspected for humans.			
	<b>Mutagenicity</b>	There is no data on the preparation itself. Mutagenicity not suspected for humans.			
	<b>Teratogenicity</b>	There is no data on the preparation itself. Teratogenicity not suspected for humans.			
	<b>Reproductive Toxicity</b>	There is no data on the preparation itself. Not considered to be dangerous to humans.			
<b>12.</b>	<b>Ecological Data</b>				
	<b>Ecotoxicity</b>	Not readily biodegradable			
	<b>United States</b>				
	<b>Aquatic Ecotoxicity</b>	There is no data available on the preparation itself			
	<b>Persistence/Degradability</b>	This product has not been tested for biodegradation. Not readily biodegradable. This product is not expected to bioaccumulate through food chains in the environment.			
	<b>Canada</b>				
	<b>Aquatic Ecotoxicity</b>	There is no data available on the preparation itself			
	<b>Persistence/Degradability</b>	This product has not been tested for biodegradation. Not readily biodegradable. This product is not expected to bioaccumulate through food chains in the environment.			
	<b>Mexico</b>				
	<b>Aquatic Ecotoxicity</b>	There is no data available on the preparation itself			
	<b>Persistence/Degradability</b>	This product has not been tested for biodegradation. Not readily biodegradable. This product is not expected to bioaccumulate through food chains in the environment.			

<b>13. Disposal Considerations</b>																																																							
<b>Waste Disposal</b>	<p>The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions, and any by-products should at all times comply with the requirement of environmental protection and waste disposal legislation and any regional or local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and it's container must be disposed of in a safe way. Empty containers or liners may contain some product residues. Avoid dispersal of spilled material and run-off and contact with soil, waterways, drains, and sewers.</p> <p><b>Disposal should be in accordance with applicable regional, national, and local laws and regulations</b>  <b>Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE LIMITS AND PERSONAL PROTECTIVE EQUIPMENT for additional handling information and protection of employees.</b></p>																																																						
<b>14. Transportation Information</b>																																																							
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<b>United States</b>																																																							
<b>HSC Classification</b>		Not Regulated																																																					
<b>TSCA 8(a) IUR Exempt/Partial Exemption</b>		Not Determined																																																					
<b>United States Inventory (TSCA 8b)</b>		All components are listed or exempt																																																					
<b>Clean Air Act Section 112(b) – Hazardous Air Pollutants (HAP'S)</b>		Not listed																																																					
<b>SARA 313: No listed substances</b>																																																							
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<b>Canada</b>									
<b>WHMIS (Canada)</b>	Not controlled under WHMIS (Canada)								
<b>Canadian NPRI</b>	None of the components are listed								
<b>CEPA Toxic Substances</b>	None of the components are listed								
<b>Canada Inventory</b>	All components are listed or exempted								
<b>Mexico</b>									
<b>Classification</b>	 <p style="text-align: center;">Health: 1 Flammability: 0 Reactivity: 0</p>								
<b>16. Other Information</b>									
<b>Labeling Requirements</b>	NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED								
<b>Hazardous Material Information System (USA)</b>	<table border="1" style="display: inline-table; vertical-align: top;"> <tr> <td style="background-color: #0000FF; color: white;"><b>HEALTH</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #FF0000; color: white;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td style="background-color: #FFFF00; color: black;"><b>REACTIVITY</b></td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td style="background-color: #FFFFFF; color: black;"><b>PERSONAL PROTECTION</b></td> <td style="text-align: center;"><b>B</b></td> </tr> </table> <p style="margin-left: 20px;"><b>HMIS Ratings are based on a 0-4 scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks.</b></p>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>0</b>	<b>REACTIVITY</b>	<b>0</b>	<b>PERSONAL PROTECTION</b>	<b>B</b>
<b>HEALTH</b>	<b>1</b>								
<b>FLAMMABILITY</b>	<b>0</b>								
<b>REACTIVITY</b>	<b>0</b>								
<b>PERSONAL PROTECTION</b>	<b>B</b>								
<b>The customer is responsible for determining the PPE code for this material.</b>									
<b>Date of Issue</b>	February 3, 2015								
<b>Version</b>	2								
<b>Changes from Previous Version</b>	Yes								
<b>Prepared by:</b>	ECL Research and Development Department								
<p><b>Notice to reader:</b> Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Appropriate warnings and safe handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Engineered Custom Lubricants assumes no responsibility for accuracy of information unless the document is the most current available from an official Engineered Custom Lubricants source. Engineered Custom Lubricants neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.</p>									