SAFETY DATA SHEET

Print date: 05/21/2020 **Revision Date:** 05/21/2020 **Revision Number:** 1

1. IDENTIFICATION

Product identifier

Product Name: TRIBOGEL 2050
Product code: 017449-01

Other means of identification

Synonyms No information available

Application

Recommended Use Lubricating Grease
Uses advised against For industrial use only

Supplier/Manufacturer:

Supplier:
ENGINEERED CUSTOM LUBRICANTS (ECL)
3851 Exchange Avenue
Aurora, IL 60504 USA
Phone: (630)449-5000
Email: she@quakerhoughton.com

Emergency telephone number:
* 24 HOUR TRANSPORTATION:
**CHEMTREC: 1-800-424-9300
+703-527-3887 (Call collect outside of US)
* 24 HOUR EMERGENCY HEALTH & SAFETY:
**(800) 523-7010 (Within US only) Outside of US call (703) 527-3887

2. HAZARDS IDENTIFICATION

GHS Classification

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

Chronic aquatic toxicity	Category 3

Label Elements

Emergency Overview

Hazard Statements
Harmful to aquatic life with long lasting effects

Appearance Light green	Physical State Grease	Odor Hydrocarbon-like

Precautionary Statements - Prevention
Avoid release to the environment

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None known

Other Information
Causes mild skin irritation. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Unknown acute toxicity 1.25% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Diboron Calcium Tetraoxide	13701-64-9	1 - 5%
Bis(nonylphenyl)amine	36878-20-3	1 - 5%
4-methyl-2, 6-di-tert-butyl-phenol	128-37-0	<1%
Diphenylamine	122-39-4	<1%

The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

General advice: Show this safety data sheet to the doctor in attendance. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Wash off with soap and water. If symptoms persist, call a physician

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin contact: Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person

Inhalation: Move to fresh air in case of accidental inhalation of vapors. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

Note to physician: Treat symptomatically.

Medical condition aggravated by exposure: Dermatitis.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical, CO2, water spray or `alcohol` foam. Do not use water with full jet.

Specific hazards: Thermal decomposition of this product will generate gaseous hydrogen fluoride (HF), which is corrosive and can cause burns and other fluorinated compounds. Do not allow material to contaminate ground water system.

Special protective equipment for fire-fighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Explosion data Water mist may be used to cool closed containers

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Ensure adequate ventilation. Do not breathe vapour/dust. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Environmental precautions: Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system. Keep away from living quarters. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling

Technical measures/precautions: Provide sufficient air exchange and/or exhaust in work rooms.

Safe handling advice: In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe vapors or spray mist. Wear personal protective equipment. Avoid contact with skin and eyes. Wash thoroughly after handling.

Storage

Technical measures/storage conditions: Store at room temperature in the original container.

Incompatible products: See Section 10, Materials to avoid

Safe storage temperature: 40 - 100 ° F

Shelf life: 3 years

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	ACGIH Exposure Limits	OSHA TWA (final)	NIOSH - Pocket Guide
Calcium carbonate	None known	None known	10 mg/m³ (TWA)

			5 mg/m³ (TWA)
Diboron Calcium Tetraoxide	2 mg/m³ (TWA)	None known	None known
4-methyl-2, 6-di-tert-butyl-phenol	2 mg/m³ (TWA)	None known	10 mg/m³ (TWA)
Diphenylamine	10 mg/m³ (TWA)	None known	10 mg/m³ (TWA)

Engineering measures: Ensure adequate ventilation

Personal Protective Equipment:

General: Provide easy access to eyewash/safety shower facilities.

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, respiratory protection may be required. Contact your site safety representative for proper respirator selection.

Eye protection: Wear safety glasses with side shields (or goggles)

Hand protection: Wear chemical-resistant gloves as appropriate for the risk of exposure. Contact your safety department for specific recommendations

Skin and body protection: Wear protective clothing and appropriate footwear necessary for the risk of exposure. Contact your health and safety department for specific recommendations

Hygiene measures: Handle in accordance with sound chemical hygiene practices. Wear the appropriate PPE. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke while using chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Grease
Appearance	Light green
Odor	Hydrocarbon-like
Odor Threshold	No information available
pH concentrate:	No information available
pH Dilution	No information available
Melting/freezing point	No information available
Boiling Point/Range	No information available
Flash Point	215 °C / 410 °F

Method	Cleveland Open Cup (COC)
Evaporation rate	No information available
Flammability Limits in Air	
upper flammability limit	No information available
lower flammability limit	No information available
VOC Content Product (lb/gal)	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity (g/cc, 15 °C)	No information available
Bulk Density (lb/gal, 15 C)	1.045
Water Solubility	Insoluble in water
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
Decomposition Temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Molecular Weight	No information available

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	To avoid thermal decomposition, do not overheat.
Materials to avoid:	Strong oxidizing agents. Strong acids. Strong bases. Alkali metals. Powdered metals.
Hazardous decomposition products:	None under normal use. Thermal decomposition of this product will generate gaseous hydrogen fluoride (HF), which is corrosive and can cause burns and other fluorinated compounds.
Hazardous Polymerization:	No information available.

11. TOXICOLOGICAL INFORMATION

No toxicological information is available on the product. Data obtained on components are summarized below.

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye Contact Contact with eyes may cause irritation.

Skin Contact Prolonged contact may cause redness and irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diboron Calcium Tetraoxide	-	-	-
Bis(nonylphenyl)amine	> 5000 mg/kg (Rat) Oral LD50 Rat >5000 mg/kg (Source: IUCLID)	-	-
4-methyl-2, 6-di-tert-butyl-phenol	> 2930 mg/kg (Rat) Oral LD50 Rat >2930 mg/kg (test substance administered as an aqueous dispersion at 10% w/v of arabic gum, Source: EPA_HPV)	> 2000 mg/kg (Rat) Dermal LD50 Rat >2000 mg/kg (no deaths occurred, Source: JAPAN_GHS)	-
Diphenylamine	= 1120 mg/kg (Rat) Oral LD50 Rat 1120 mg/kg (Source: NLM_CIP)	> 2000 mg/kg (Rabbit) Dermal LD50 Rabbit >2000 mg/kg (Source: EU_RAR)	-

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

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	IARC Carcinogens	NTP	OSHA - Select Carcinogens
Diboron Calcium Tetraoxide	Not listed	Not listed	Not listed
Bis(nonylphenyl)amine	Not listed	Not listed	Not listed
4-methyl-2, 6-di-tert-butyl-phenol	Group 3	Not listed	Not listed
Diphenylamine	Not listed	Not listed	Not listed

Sensitization No information available.

Mutagenic effects: No information available.

Reproductive Toxicity No information available.

Developmental Toxicity No information available.

Teratogenic No information available.

Specific target organ systemic toxicity (single exposure) No information available.

Specific target organ systemic toxicity (repeated exposure) No information available.

Aspiration hazard Based on viscosity and/or components, not expected to be an aspiration hazard.

Additional information on toxicological effects
No information available

12. ECOLOGICAL INFORMATION

Harmful to aquatic life with long lasting effects

Chemical Name	Toxicity to Fish	Daphnia Magna (Water Flea)	Toxicity to Algae
Diboron Calcium Tetraoxide	No data	No data	No data
Bis(nonylphenyl)amine	1000: 96 h Pimephales promelas mg/L LC50 semi-static	14 - 28: 96 h Mysidopsis bahia mg/L LC50	No data
4-methyl-2, 6-di-tert-butyl-phenol	5: 48 h Oryzias latipes mg/L LC50	No data	6: 72 h Pseudokirchneriella subcapitata mg/L EC50 0.42: 72 h Desmodesmus subspicatus mg/L EC50
Diphenylamine	3.47 - 4.14: 96 h Pimephales promelas mg/L LC50 flow-through	1.69 - 2.46: 48 h Daphnia magna mg/L EC50	1.5: 72 h Scenedesmus subspicatus mg/L EC50

3.75% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Octanol/water partition coefficient
Diboron Calcium Tetraoxide	-
Bis(nonylphenyl)amine	-
4-methyl-2, 6-di-tert-butyl-phenol	4.17
Diphenylamine	3.4

Mobility: No data available

Ozone: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a

permitted facility or as advised by your local hazardous waste regulatory authority.

Contaminated packaging: Do not re-use empty containers

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust) Sweep up and shovel into suitable containers for disposal

Chemical Name Diphenylamine
122-39-4

RCRA - Hazardous Constituents - Appendix:	hazardous constituent - no waste number

14. TRANSPORT INFORMATION

U. S. DEPARTMENT OF TRANSPORTATION:
Proper shipping name: Not regulated

TDG (CANADA):
Proper shipping name: Not regulated

IMDG/IMO:
Proper shipping name: Not regulated

IATA/ICAO:
Proper shipping name: Not regulated

15. REGULATORY INFORMATION

Federal Regulations

CERCLA/SARA Information:

SARA (311, 312) hazard class: See GHS Classification in Section 2 for hazard class information.

Chemical Name	Hazardous Substances and RQs	Extremely Hazardous Substances and TPQs	SARA 313 Emission Reporting
Diboron Calcium Tetraoxide	Not listed	Not listed	Not listed
Bis(nonylphenyl)amine	Not listed	Not listed	Not listed
4-methyl-2, 6-di-tert-butyl-phenol	Not listed	Not listed	Not listed
Diphenylamine	Not listed	Not listed	1.0 %

Clean Air and Clean Water Acts:

Chemical Name	Hazardous Air Pollutants	CWA - Hazardous Substances	CWA - Toxic Pollutants	CWA - Priority Pollutants
Diboron Calcium Tetraoxide	Not listed	Not listed	Not listed	Not listed
Bis(nonylphenyl)amine	Not listed	Not listed	Not listed	Not listed
4-methyl-2, 6-di-tert-butyl-phenol	Not listed	Not listed	Not listed	Not listed
Diphenylamine	Not listed	Not listed	Not listed	Not listed

U.S. STATE REGULATIONS (RTK):

Chemical Name	California Proposition 65	PARTK	MI Critical Materials	NJRTK	MARTK
Diboron Calcium Tetraoxide	Not Listed	Not Listed	Not Listed	0241	Not Listed
Bis(nonylphenyl)amine	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
4-methyl-2, 6-di-tert-butyl-phenol	Not Listed	Present	Not Listed	0814	Present
Diphenylamine	Not Listed	Environmental hazard	Not Listed	0796	Present

California Proposition 65 Status: May contain trace amounts of listed chemicals: ethylebenzene

CANADIAN REGULATIONS:

Chemical Name	CEPA Schedule I	Challenge Substances
Diboron Calcium Tetraoxide	Not listed	Not listed
Bis(nonylphenyl)amine	Not listed	Not listed
4-methyl-2, 6-di-tert-butyl-phenol	Not listed	Not listed
Diphenylamine	Listed	Not listed

INVENTORY STATUS:

United States TSCA Inventory: This product complies with TSCA

Canada DSL/NDSL Inventory List This product complies with DSL

16. OTHER INFORMATION

Sources of key data used to compile the data sheet: Material safety data sheets of the ingredients.

Prepared by: Safety, Health and Environmental Department

Revision Date: 05/21/2020
Reason for revision: New formulation.

Personal protection recommendations should be reviewed by purchasers. Workplace conditions are important factors in specifying adequate protection.

Disclaimer
This product's safety information is provided to assist our customers in assessing compliance with safety/health/environmental regulations. The information contained herein is based on data available to us and is believed to be accurate. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of the product. Since the use of this product is within the exclusive control of the user, it is the user's obligation to determine the conditions for safe use of the product. Such conditions should comply with all regulations concerning the product. The company referenced in this Safety Data Sheet assumes no liability for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to the gross negligence of such company.

End of Safety Data Sheet