



MATERIAL SAFETY DATA SHEET

Wilwood Engineering

Product Name: WILWOOD SILICONE DOT 5 "FIVE" BRAKE FLUID

Effective Date: 9 September 2014

Publication Date: 9 September 2014

1. PRODUCT AND COMPANY IDENTIFICATION:

Trade Name: Wilwood Silicone DOT 5 "FIVE" Brake Fluid
Products: 4055
CAS: Not applicable (mixture)
Synonyms: Polydimethylsiloxane hydraulic fluid
Recommended use: Disk and drum hydraulic brake fluid
Restrictions: Do not use where DOT 5 is specified

Company Identification:

Wilwood Engineering
 4700 Calle Bolero
 Camarillo, CA 93012, USA

Emergency Telephone Number:

(805) 388-1188. Hours 7:30 am - 5:00 pm Monday - Friday PST
 After Hours, N/A

2. HAZARDS IDENTIFICATION:

Appearance - Purple liquid

Odor - Mild

Classification(s) - Skin Irritation, Category 3 • Carcinogenicity, Category 2 • Aquatic Toxicity, Acute Category 3

Target organs - None

Symbol(s) -



Signal Word - Warning

Hazard Statement(s) - (H315) Causes mild skin irritation. (H351) Suspected of causing cancer. (H402) Harmful to aquatic life.

Other hazard(s) - Mildly irritating to the eyes and skin. Respiratory exposure is likely to cause irritation.

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Precaution(s) - Wear eye and skin protection before handling. Do not breathe mist/vapors/spray. Wear protective gloves/protective clothing. IF IN EYES: Flush with water for 15 minutes and consult a physician. Do not ingest. IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Disposal - Keep out of waterways. Check local, national, and international regulations for proper disposal

HMIS (estimated) - Health – 2 Fire – 1 Instability – 0

3. COMPOSITION INFORMATION:

Hazardous Ingredients:

<u>Component</u>	<u>CAS No.</u>	<u>Conc (wt%)</u>
Polydimethylsiloxane	63148-62-9	90 – 100
Tributylphosphate	126-73-8	1 – 5
Additives	Proprietary	< 1

4 FIRST AID MEASURES:

Eyes - Remove contact lenses, if worn. Rinse with running water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.

Skin - Remove affected clothing and launder before reuse. Wash affected area for at least 15 minutes with soap and running water. If irritation occurs, consult a physician

Inhalation - Inhalation is unlikely. If mists or sprays are inhaled, move victim to fresh air. If breathing is difficult, give artificial respiration and consult a physician.

Ingestion - Do NOT induce vomiting. If a significant volume has been swallowed, consult a physician.

Additional Info - Not determined

Specific Treatments - Not determined. Treat symptomatically

5. FIRE FIGHTING MEASURES:

NFPA (estimated) - Health – 2 Fire – 1 Instability – 0

Flash Point - > 120°C / 248°F (calculated)

Extinguishing Media - For small fires use dry chemical or CO₂. For large fires apply large (flooding) quantities of water from as far away as possible in a spray or mist, or use dry chemical or CO₂.

Unsuitable Media - Not determined

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Firefighting Procedures - Wear a self-container breathing apparatus if necessary based on concentrations of smoke. Evacuate in accordance with emergency planning. Use water spray to keep containers cool

Unusual Hazards - Not Determined

6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions, protective equipment and emergency procedures - Ventilate if released in a confined area. Avoid breathing mists/vapors/spray. Product may present slipping hazard if left on the floor.

Environmental Precautions - Avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways or groundwater.

Methods and materials for containment and cleaning up - Use a fluid pump to remove bulk liquid. Residual liquid can be absorbed on inert material. Dispose of contaminated adsorbent as hazardous waste. Wash the area with water after excess product and adsorbent is removed.

7. HANDLING AND STORAGE:

Max. Handling Temp - Not determined

Procedures - Use in a well ventilated area. Avoid breathing mists/vapors/spray. Avoid handling hot product where possible. Use appropriate personal protective equipment to avoid contact with skin and eyes. Note the location of nearest emergency shower and eye wash station before use. Store with the lid tightly closed in a cool, dry, well-ventilated place. Do not store near oxidizers. Dispose of spilled or used material in accordance with local, regional, national, and international regulations.

Max Store Temp -Do not store or handle at elevated temperatures.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION:

Exposure Limits

US

Guidelines by component

Tributylphosphate

OSHA TWA: 0.2ppm

ACGIH TWA: 0.2ppm

Other Exposure Limits - Not determined

Engineering Controls - Use in a well ventilated area. Local and general ventilation should keep methanol vapor concentration below permissible limits. Where exposure potential exceeds recommended limits, use a NIOSH/OSHA approved supplied air respirator as recommended.

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Personal Protective Equipment

Respiratory - Use a NIOSH or CEN approved full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respiratory is the only means of protection, use a full-face supplied air respirator

Eye - Use tightly-fitting chemical splash goggles. Use face shield, especially where splashing is likely to occur

Gloves - Use nitrile, butyl, viton, or fluoroelastemer gloves. Even appropriate materials may degrade after prolonged exposure with product.

Clothing - Use chemical resistant pants and jackets, preferably of butyl or nitrile rubber

Other - Locate the nearest eyewash station and safety shower before handling this product. Limit exposure whenever possible.

Hygiene - Wash thoroughly after handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	Purple liquid
Odor	Mild
Odor threshold	Not determined
pH	Not determined
Melting Point	Not determined
Initial Boiling Pt	> 260°C / 500°F
Flash Point	> 120°C / 248°F
Evaporation Rate	Not determined
Upper Flammable Lm	Not determined
Lower Flammable Lm	Not determined
Explosive Data	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Volatile Organics	Not determined
Density	0.985 mg/cu. cm @25.0°C
Solubility	Insoluble in water and organic solvents
Kow	Not determined
Viscosity	42.7 mm/s ² @ 40°C
Autoignition Point	Not determined
Decomposition Temp	Not determined

10. STABILITY AND REACTIVITY:

Stability - Material is normally stable at ambient temperatures and pressures.

Decomposition Temp - Not determined

Incompatibility - Keep away from strong oxidizers and strong bases.

Polymerization - Will not occur

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Thermal Decomposition - Primarily oxidizes to carbon dioxide and silicon dioxide in normal combustion conditions. In lower oxygen environments carbon monoxide, formaldehyde, or formic acid may be formed.

Conditions to Avoid - Keep away from strong oxidizers as reaction may occur

11. TOXICOLOGICAL INFORMATION:

Acute Exposure

Eye Irritation - May cause mild to moderate irritation of the eye if exposed to liquid or in high vapor concentrations. May cause irritation, tearing, or burning of the eyes.

Skin Irritation - Expected to be mildly irritating to the skin. Symptoms of irritation may include redness, drying, and cracking of the skin.

Respiratory Irritation - High vapor concentrations may cause transient irritation to the respiratory system.

Dermal Toxicity - This product can be absorbed through the skin. Limit exposure to skin where possible.

Inhalation Toxicity - Toxicity is similar to that for oral ingestion, though this exposure mode is far less likely to occur.

Oral Toxicity - Low order of toxicity, not expected to cause injury under normal exposure conditions.

Aspiration Hazard - This product is of low risk for aspiration due to viscosity. Do NOT induce vomiting, as this increases risk of aspiration.

Chronic Exposure

Chronic Toxicity - This product may cause dryness or defatting of the skin, dermatitis, or may aggravate existing skin conditions.

Carcinogenicity - This product and its components are NOT listed by the IARC, NTP, ACGIH, or OSHA as carcinogens. Tributylphosphate in this product has been found tumorigenic in rats and mice (oral exposure) by RTECS criteria (Kidney, Ureter, Bladder, Liver).

Mutagenicity - No data available

Reproductive Toxicity - Not likely based on exposure to product. Tributylphosphate in this product has been linked to growth abnormalities in newborn rats (oral)

Teratogenicity - Not likely based on exposure to product. Tributylphosphate in this product has been linked to fetotoxicity in rats (oral)

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Additional Information

Target organ toxicity - Product does not exhibit specific organ toxicity. Tributylphosphate in this product has been linked to tumors of the bladder, kidney, ureter, and liver in rats and mice.

Synergistic effects - No data available

Pharmacokinetics - No data available

12. ECOLOGICAL INFORMATION:

Environmental Toxicity

Freshwater Fish - Acute LC50 > 170 mg/L (96h, goldfish)

Freshwater Invertebrates - Acute EC50 > 70mg/l (48h, water flea)

Algae - Acute EC50 > 20mg/l (72h, green algae)

Saltwater Fish - Not determined

Saltwater Invertebrates - Not determined

Bacteria - Not determined

Miscellaneous - Not determined

Environmental Fate

Biodegradation - No data available. Expected to have little to no biodegradation potential and likely to degrade primarily through photochemical oxidation

Bioaccumulation - Product adheres to soil and is unlikely to be absorbed by organisms. Tributylphosphate in this product has an BCF of 21 – 35.

Soil Mobility - Product tightly adsorbs to soil, slowly evaporates and oxidizes at environmentally relevant temperatures

Other Effects - Not determined

13. DISPOSAL CONSIDERATIONS:

Disposal Considerations

All disposal practices must be in accordance with local, regional, national, and international regulations. Store material for disposal as indicated in Section 7. Disposal by controlled incineration or by secure land fill may be acceptable – review applicable regulations or regulatory bodies before making disposal decisions.

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Contaminated Containers or Packaging

Do NOT weld, cut, or grind empty containers. Dispose of empty containers in accordance with local, regional, national, and international regulations

14. TRANSPORT INFORMATION:

Description shown may not apply to all shipping situations. Consult applicable shipping codes to determine any additional shipping requirements

US DOT - Not dangerous goods

IMDG - Not dangerous goods

ICAO/IATA - Not dangerous goods

15. REGULATORY INFORMATION:

Global Chemical Inventories/Regulations

USA - All components of this material are on the US TSCA

Other TSCA Reg - None known

EU - No information available

New Zealand - May require notification before sale under New Zealand Regulations

Canada - No information available

Canada WHMIS - Not determined

Other U.S. Federal Regulations

SARA Ext. Haz. Subst - No components listed as Extremely Hazardous Substances list. See 40 CFR 355

SARA Sect. 313 - No components of this product are subject to reporting under SARA Title III, Section 313 - See 40 CFR 372

SARA 311/312 Class Acute Hazard - YES

Chronic Hazard - NO

Fire Hazard - NO

Reactivity Hazard - NO

CERCLA Haz. Sub - No components listed. See 40 CFR 302

State Regulations

CA Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Right to Know Component

Polydimethylsiloxane

(CAS # 63148-62-9)

Tributylphosphate

(CAS # 126-73-8)

Right to Know States

NJ, PA

MA, PA, NJ, LA

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16. OTHER INFORMATION

Prepared according to the UN Globally Harmonized System for the Classification and Labeling of Chemicals (GHS) by Wilwood Engineering, 4700 Calle Bolero, Camarillo CA 93012.

Revisions

Because of the major changes, this data sheet should be read as entirely new (Rev B 9/9/14).

NOTICE:

The information herein is presented in good faith and believed to be accurate as of the effective date shown on the first page of this document. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

U.S. REGULATIONS:

SARA HAZARD CATEGORY:

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title 111) and is considered, under application definitions, to meet the following categories:

An immediate health hazard.

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