

# Safety Data Sheet

KDS0012US

Revision Date: 08-28-2019      Update: 07-26-2022      Date of first issue: 08-08-2016

## 1. Identification

**Product identifier**

**Product name** : ULVOIL D-31  
**Recommended use** : Fluids, Modified silicone fluids  
 Diffusin pump oil

**Recommended restrictions** : Industrial use only.

**Details of the supplier of the safety data sheet**

**Company** : ULVAC, Inc.  
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 253-8543, JAPAN  
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## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

**Label elements**

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

**HMIS® ratings** Health: 1  
 Flammability: 1  
 Physical hazard: 0

## 3. Composition/information on ingredients

**Substances**

Chemical name	Common name and synonyms	CAS number	%
1,3,5-Trimethyl-1,1,3,5,5-pentaphenyltrisiloxane		3390-61-2	100

## 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.  
**Skin contact** Wash skin with soap and water. Get medical attention if irritation develops and persists.  
**Eye contact** Rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

<b>Ingestion</b>	Rinse mouth. Get medical attention immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Not available.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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### 5. Fire-fighting measures

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<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Specific hazards arising from the chemical</b>	By heating and fire, harmful vapors/gases may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.

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### 6. Accidental release measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	Wear appropriate personal protective equipment.
<b>Methods and materials for containment and cleaning up</b>	Eliminate sources of ignition.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills in original containers for re-use.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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### 7. Handling and storage

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<b>Precautions for safe handling</b>	Provide adequate ventilation. Use adequate ventilation when this product is heated at approximately 150 °C (300 °F) and above in the presence of air. Use care in handling/storage. Do not breathe the mist or vapor. Avoid prolonged exposure.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Keep in original container.

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### 8. Exposure controls/personal protection

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<b>Occupational exposure limits</b>	This substance has no PEL, TLV, or other recommended exposure limit.
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Provide adequate general and local exhaust ventilation. Provide eyewash station.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Tightly sealed safety glasses according to EN 166.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear protective gloves.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	If ventilation is insufficient when heating use chemical respirator with organic vapor cartridge.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. This product can generate formaldehyde at approximately 150 °C (300 °F) and above in the presence of air. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential cancer hazard. So, use adequate ventilation or wear protective equipment such as gloves, goggles, organic vapor respirator or protective clothing when this product is heated at approximately 150 °C (300 °F) and above in the presence of air.

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**9. Physical and chemical properties**

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<b>Appearance</b>	
<b>Form</b>	Liquid.
<b>Color</b>	Colorless. Clear.
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not measurable (Refer to water solubility)
<b>Melting point/freezing point</b>	No data
<b>Initial boiling point and boiling range</b>	469.4 °F (243 °C) (at 0.5mmHg)
<b>Flash point</b>	> 201.2 °F (> 94 °C) Closed Cup 464 °F (240 °C) Open Cup
<b>Evaporation rate</b>	Negligible (Butyl Acetate=1)
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	No data
<b>Flammability limit - upper (%)</b>	No data
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Negligible ( 25 °C )
<b>Vapor density</b>	Not applicable
<b>Relative density</b>	1.09 ( 25 °C )
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not soluble
<b>Partition coefficient (n-octanol/water)</b>	No data
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	160 mm <sup>2</sup> /s ( 25 °C )
<b>Other information</b>	
<b>Molecular weight</b>	No data

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**10. Stability and reactivity**

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<b>Reactivity</b>	No hazardous reaction known under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable at normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	None known.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde .

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## 11. Toxicological information

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### Information on likely routes of exposure

Inhalation	No significant effects are expected.
Skin contact	No significant effects are expected.
Eye contact	No significant effects are expected.
Ingestion	No significant effects are expected.

**Symptoms related to the physical, chemical and toxicological characteristics** Not available.

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
1,3,5-Trimethyl-1,1,3,5,5-pentaphenyltrisiloxane (CAS 3390-61-2)		
<b>Acute</b>		
Oral LD50	Rat	> 5000 mg/kg (estimated by similar methylphenylpolysiloxane)

**Skin corrosion/irritation** Not available.

**Serious eye damage/eye irritation** Not available.

#### Respiratory or skin sensitization

**Respiratory sensitization** Not available.

**Skin sensitization** Not available.

**Germ cell mutagenicity** Not available.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**Reproductive toxicity** Not available.

**Specific target organ toxicity - single exposure** Not available.

**Specific target organ toxicity - repeated exposure** Not available.

**Aspiration hazard** Not available.

**Chronic effects** Not available.

**Further information** This product can generate formaldehyde at approximately 150 °C (300 °F) and above in the presence of air. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential cancer hazard. So, use adequate ventilation or wear protective equipment such as gloves, goggles, organic vapor respirator or protective clothing when this product is heated at approximately 150 °C (300 °F) and above in the presence of air.

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## 12. Ecological information

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**Ecotoxicity** No ecotoxicity data noted for the ingredient(s).

**Persistence and degradability** No data available.

**Bioaccumulative potential** No data available.

**Mobility in soil** Not available.

**Mobility in general** No data available.

**Other adverse effects** Not available.

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### 13. Disposal considerations

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**Disposal instructions** Follow applicable Federal, State and Local regulations.

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### 14. Transport information

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**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This product is not intended to be transported in bulk.

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### 15. Regulatory information

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**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 313 (TRI reporting)**

**US state regulations** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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### 16. Other information, including date of preparation or last revision

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**Issue date** 08-08-2016  
**Revision date** 08-28-2019  
**Version #** 02

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**HMIS® ratings**

Health: 1  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**

Health: 1  
Flammability: 1  
Instability: 0

**NFPA ratings**



**Disclaimer**

This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

This product has been designed, manufactured and developed solely for general industrial use only. This product is not designed for, intended for use as, or suitable for, medical, surgical or other particular purposes. Users have the sole responsibility and obligation to determine the suitability of this product for any application, to make preliminary tests, and to confirm the safety of this product for their use. Users must never use this product for the purpose of implantation into the human body and/or injection into humans.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.