**SAFETY DATA SHEET**

**MT-704 DIFFUSION PUMP FLUID**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>CAS Number</th>
<th>Date of last issue</th>
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<tbody>
<tr>
<td>1.3</td>
<td>1/25/2022</td>
<td>3982-82-9</td>
<td>7/21/2015</td>
<td>7/21/2015</td>
</tr>
</tbody>
</table>

**SECTION 1. IDENTIFICATION**

- **Product name**: MT-704 DIFFUSION PUMP FLUID
- **Product code**: N/A

**Manufacturer or supplier's details**

- **Company name of supplier**: Midwest Tungsten Service
- **Address**: 540 Executive Drive
  Willowbrook, IL 60527
- **Telephone**: (630) 325-1001
- **Emergency telephone**: 24 Hour Emergency Telephone: (989) 496-5900
  CHEMTREC: (800) 424-9300

**Recommended use of the chemical and restrictions on use**

- **Recommended use**: Vacuum diffusion pump fluid
- **Restrictions on use**: None

**SECTION 2. HAZARDS IDENTIFICATION**

- **GHS Classification**: Not a hazardous substance or mixture.
- **GHS Label element**: Not a hazardous substance or mixture.
- **Other hazards**: None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Chemical nature</th>
<th>Hazardous ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tretramethyltetraphenyl trisiloxane</td>
<td>3982-82-9</td>
<td>Silicone compound</td>
<td>No hazardous ingredients</td>
</tr>
</tbody>
</table>

**SECTION 4. FIRST AID MEASURES**

- **If inhaled**: If inhaled, remove to fresh air.
  Get medical attention if symptoms occur.
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In case of skin contact
Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact
Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed
If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed
None known.

Protection of first-aiders
No special precautions are necessary for first aid responders.

Notes to physician
Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media
None known.

Specific hazards during fire fighting
Exposure to combustion products may be a hazard to health.

Hazardous combustion products
Carbon oxides
Silicon oxides
Formaldehyde

Specific extinguishing methods
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Follow safe handling advice and personal protective equipment recommendations.
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Emergency procedures

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation: Use only with adequate ventilation.

Advice on safe handling: Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage: Keep in properly labeled containers. Store in accordance with the particular national regulations.

Materials to avoid: Do notstore with the following product types:
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters: Contains no substances with occupational exposure limit values.

Engineering measures: Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.
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Personal protective equipment
Respiratory protection: No personal respiratory protective equipment normally required.

Hand protection

Remarks
Wash hands before breaks and at the end of workday.

Eye protection
Wear the following personal protective equipment:
Safety glasses

Skin and body protection
Skin should be washed after contact.

Hygiene measures
Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Midwest Tungsten customer service group.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
liquid

Color
Clear white to yellow.

Odor
none

Odor Threshold
No data available

PH
No data available

Melting point/freezing point
No data available

Initial boiling point and boiling range
215 °C

Flash point
221°C
Method: open cup

Evaporation rate
No data available

Flammability (solid, gas)
Not applicable

Upper explosion limit
No data available
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<table>
<thead>
<tr>
<th>Property/Condition</th>
<th>Value/Result</th>
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<tbody>
<tr>
<td>Lower explosion limit</td>
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</tr>
<tr>
<td>Vapor pressure</td>
<td>10^-6 to 10^-8 torr at 25°C</td>
</tr>
<tr>
<td>Relative vapor density</td>
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<tr>
<td>Relative density</td>
<td>1.07</td>
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<td>Solubility(ies)</td>
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<tr>
<td>Water solubility</td>
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</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
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</tr>
<tr>
<td>Autoignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
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<td>Viscosity</td>
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<td>Viscosity, [cinematic]</td>
<td>39 mm²/s</td>
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<td>Explosive properties</td>
<td>Not explosive</td>
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<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
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<tr>
<td>Molecular weight</td>
<td>484</td>
</tr>
</tbody>
</table>

## SECTION 10. STABILITY AND REACTIVITY

**Reactivity**

Not classified as a reactivity hazard.

**Chemical stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.

**Conditions to avoid**

None known.

**Incompatible materials**

Oxidizing agents

**Hazardous decomposition products**

**Thermal decomposition**

Formaldehyde
SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
- Inhalation
- Skin contact
- Ingestion
- Eye contact

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.
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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Resource Conservation and Recovery Act (RCRA)
When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste.

Waste Code: D018

Waste from residues: Dispose of in accordance with local regulations.

Contaminated packaging: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good
SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards
SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know
- Trimethylpentaphenyl trisiloxane 3982-82-9 90 - 100 %
- Phenyl methyl siloxane 38421-40-6 1 - 5 %

New Jersey Right To Know
- Trimethylpentaphenyl trisiloxane 3982-82-9 90 - 100 %
- Phenyl methyl siloxane 38421-40-6 1 - 5 %
- Tetraphenyldimethylsiloxane 807-28-3 1 - 5 %

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

The ingredients of this product are reported in the following inventories:

KECI : All ingredients listed, exempt or notified.
REACH : All ingredients (pre-)registered or exempt.
TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
AICS : All ingredients listed or exempt.
IECSC : All ingredients listed or exempt.
PICCS : All ingredients listed or exempt.
DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the
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ENCS/ISHL

Canadian Domestic Substances List (DSL).

All components are listed on ENCS/ISHL or exempted from inventory listing.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

<table>
<thead>
<tr>
<th>NFPA:</th>
<th>HMIS III:</th>
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<tr>
<td>1</td>
<td>HEALTH</td>
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<tr>
<td>0</td>
<td>FLAMMABILITY</td>
</tr>
<tr>
<td>0</td>
<td>PHYSICAL HAZARD</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = slight, 2 = moderate, 3 = high, 4 = extreme, * = chronic

Sources of key data used to compile the Material Safety Data Sheet


Revision Date 1/25/2022

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.
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