

Dielectric Fluids DF45, DF45II

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules
And Regulations Revision Date: 06/15/2020 Date of issue: 06/15/2020

Version: 1.2

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: DF45, DF45II

1.2. Intended Use of the Product

No use is specified.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Soltex Inc. (Synthetic Oils & Lubricants of Texas)

3707 FM 1960 W Ste. 560

Houston, TX 77068

(281)-587-0900

soltexinc.com

1.4. Emergency Telephone Number

Emergency Number : (800)-424-9300 (CHEMTREC); (281)-587-0900 (Other Safety Information)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

ASPIRATION HAZARD - Category 1

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H304 - May be fatal if swallowed and enters airways.

Precautionary Statements (GHS-US)

: P301+P310 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER.
P331 - Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

A significant portion of the mixture consists of a substance capable of producing an aspiration hazard. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure, and even death.

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

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3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Benzene, C10-13-alkyl derivatives	(CAS No) 67774-74-7	75 - 100	Asp. Tox. 1, H304
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms	(CAS No) 85117-41-5	0 - 25	Asp. Tox. 1, H304

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water or soap and water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May be fatal if swallowed and enters airways.

Inhalation: No known significant effects or critical hazards.

Skin Contact: No known significant effects or critical hazards.

Eye Contact: No known significant effects or critical hazards.

Ingestion: May be fatal if swallowed and enters airways. Aspiration into the lungs can cause severe pulmonary edema/hemorrhage.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: In a fire or if heated, a pressure increase will occur and the container may burst.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Under fire conditions, may produce fumes, smoke, oxides of carbon and hydrocarbons.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE). Avoid breathing vapor or mist.

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

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6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

No use is specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

8.2. Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Color, D-1500	: <1
Odor	: Not available
Odor Threshold	: Not available
pH	: Not available

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Evaporation Rate	: Not available
Melting Point	: <-39°C (<-38.2°F)
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point, min	: 130 °C (266 °F) (COC)
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity, 15.6°/15.6°C	: 0.85
Solubility	: Not available
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Viscosity, Kinematic	: 4 - 7.3 cSt @ 40 °C
Explosive Properties	: Product is not explosive
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.
- 10.5. Incompatible Materials:** No specific data.
- 10.6. Hazardous Decomposition Products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	LD50 Oral	Rat	>5000 mg/kg	-
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	LD50 Dermal	Rat - Female	>3600 mg/kg	-
	LD50 Dermal	Rat - Male	>4300 mg/kg	-
	LD50 Oral	Rat - Male	>2000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	Skin - Moderate irritant	Rabbit	-	4 hours	-
	Eye - Edema of the conjunctivae		0	-	-
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	Skin - Primary Dermal irritation index	Rabbit	1.25	4 hours	10 days
	Skin - Primary Dermal irritation index	Rabbit	0.55	24 hours	7 days

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	Skin	Guinea pig	Not sensitizing

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Mutagenicity

Product/ingredient name	Test	Experiment	Result
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	471 Bateria Reverse Mutation Test	Experiment: In vitro Subject: Bateria	Negative
	476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ	Negative
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	471 Bateria Reverse Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	471 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative

Carcinogenicity

Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	Negative	Negative	Negative	Rat	Oral	-
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms(CAS#85117-41-5)	Negative	Negative	Negative	Rat	Oral	-

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	Negative - Oral	Rat	-	-
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	Negative - Oral	Rat	1600 mg/kg	-
	Negative - Oral	Rat	>1000 mg/kg	-
	Negative - Oral	Rat	1000 mg/kg	-
	Negative - Oral	Rat	800 mg/kg	-
	Negative - Oral	Rat	400 mg/kg	-

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	ASPIRATION HAZARD - Category 1
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms(CAS#85117-41-5)	ASPIRATION HAZARD - Category 1

Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to physical, chemical, and toxicological characteristics

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.

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Ingestion : Adverse symptoms may include the following: nausea or vomiting.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	Sub-acute LOAEF Oral	Rat - Male, Female	2500 mg/kg	28 days
	Chronic NOAEL Oral	Rat	50 mg/kg	105 days
	Chronic LOAEL Oral	Rat	500 mg/kg	105 days
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	Sub-chronic NOAEF Oral	Rat - Male	500 mg/kg	39 days; 5 days/week
	Sub-chronic LOAEF Oral	Rat	1000 mg/kg	39 days; 5 days/week
	Sub-chronic NOAEF Oral	Rat - Female	1000 mg/kg	39 days; 5 days/week
	Chronic NOAEL Oral	Rat - Male, Female	1000mg/kg	90 days; 5 days/week
	Chronic LOAEL Oral	Rat - Male, Female	8000 mg/kg	90 days; 5 days/week

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Benzene, C10-13-alkyl derivatives (67774-74-7)	
Acute EC50	>0.1 mg/l (Exposure time: 72 h - Species: Algae - Scenedesmus subspicatus)
Acute EC50	>0.041 mg/l (Exposure time: 48 h - Species: Daphnia magna) - Fresh water
Acute NOEC Daphnia magna	10 mg/m ³ (Exposure time: 48 h - Species: Danio rerio) - Fresh water
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (85117-41-5)	
Acute LC50 Fish	>100 mg/l (Exposure time: 96 h - Species: Pimephales promelas) - Fresh water
Acute NOEC Daphnia	>100 ppb (Exposure time: 144 h - Species: Daphnia magna)
Acute NOEC Daphnia	1.4 mg/l (Exposure time: 48 h - Species: Daphnia magna straus)
Acute NOEC Algae	2.08 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus) - Fresh water
Acute NOEC Fish	>10 ppb (Exposure time: 14 d - Species: Brachydanio rerio) - Fresh water
Chronic LOAEL Daphnia	0.015 mg/l (Exposure time: 21 d - Species: Daphnia)
Chronic NOEC Daphnia	0.0075 mg/l (Exposure time: 21 d - Species: Daphnia magna) - Fresh water

12.2. Persistence and Degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	Guideline 301F	64.1% - 28 days	-	-
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	EU BODIS	28% - 28 days	6 mg/l	-

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Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	-	-	Readily
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	-	-	Inherent

12.3. Bioaccumulative Potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Benzene, C10-13-alkyl derivs. (CAS#67774-74-7)	6.4	35	low
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (CAS#85117-41-5)	6.7	3.162	low

12.4. Mobility in Soil

Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way. Do not empty into drains. Do not dispose of waste into sewer.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Classification

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

TDG

Not regulated as dangerous goods

ADR/RID

Not regulated as dangerous goods

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Benzene, C10-13-alkyl derivatives (67774-74-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (85117-41-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Neither this product nor its chemical components appear on any US state lists.

15.3. Canadian Regulations

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WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Benzene, C10-13-alkyl derivatives (67774-74-7)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

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Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (85117-41-5)

Listed on the Canadian DSL (Domestic Substances List)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

International Regulations

Benzene, C10-13-alkyl derivatives (67774-74-7)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Benzene, mono-C10-14-alkyl derivs., fractionation bottoms (85117-41-5)

Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the TCSI (Taiwan Chemical Substance Inventory)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 06/15/2020

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document

Soltex Inc. (Synthetic Oils & Lubricants of Texas)
3707 FM 1960 W Ste. 560
Houston, TX 77068
(281)-587-0900
soltexinc.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

GHS US/NA