

Material Safety Data Sheet

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Version 7

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name THERMINOL® 66

Product code 90025

Recommended Use Heat transfer fluids

Manufacturer Solutia Inc.
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SECTION 2: Hazards identification**EMERGENCY OVERVIEW**

May cause slight eye irritation
Substance may cause slight skin irritation

Appearance Clear**Physical State** Liquid**Odor** Characteristic**Potential health effects****Acute toxicity****Eyes**

May cause slight irritation. Not expected to produce significant adverse health effects when recommended use instructions are followed.

Skin

May cause slight irritation. Patch test on human volunteers did not demonstrate sensitization properties. Not expected to produce significant adverse health effects when recommended use instructions are followed.

Inhalation

Elevated processing temperatures may cause release of vapors which are irritating if inhaled.

Ingestion

Not expected to produce significant adverse health effects when recommended use instructions are followed.

Chronic effects

No known effect.

Aggravated Medical Conditions

Preexisting eye disorders. Skin disorders.

Environmental hazard

May cause long lasting harmful effects to aquatic life. See Section 12 for additional Ecological Information.

SECTION 3: Composition/information on ingredients

Chemical name	CAS-No	Weight %
Terphenyl, hydrogenated	61788-32-7	74 - 87
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	10 - 18
Terphenyl	26140-60-3	3 - 8

SECTION 4: First aid measures

General advice	When symptoms persist or in all cases of doubt seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Show this material safety data sheet to the doctor in attendance.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if symptoms occur.
Skin contact	Wash off immediately with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. In case of burns, immediately cool affected skin for as long as possible with cold water. For severe burns, immediate medical attention is required. Wash contaminated clothing before reuse. Discard contaminated shoes.
Inhalation	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. Maintain an open airway. Persons who have inhaled vapors or smoke fumes have to be put under medical observation for at least 48 hours, due to the delayed appearance of poisoning.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious). Remove victim to fresh air and keep at rest in a position comfortable for breathing. Loosen tight clothing such as a collar, tie, belt or waistband. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by a physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Maintain an open airway. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
Notes to physician	Treat symptomatically. Contact with hot material: Treat for thermal burns. Persons who have inhaled vapors or smoke fumes have to be put under medical observation for at least 48 hours, due to the delayed appearance of poisoning.

SECTION 5: Firefighting measures

Flammable properties	This product is not classified as a fire-resistant heat transfer fluid. Precautions to avoid sources of ignitions should be taken.
Flash point	170 °C / 338 °F
Method	DIN EN 22719, Pensky-Martens. Closed cup
Suitable extinguishing media	Water spray, Foam, Dry powder, Carbon dioxide (CO ₂)
Explosion Data	
Sensitivity to Mechanical Impact	None
Sensitivity to static discharge	None
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Clean up spill immediately. Prevent product and washings from entering drains, sewers or surface water due to high toxicity to aquatic organisms.

Methods for containment	Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.
Methods for cleaning up	Soak up with inert absorbent material. Collect in closed and suitable containers for disposal.

SECTION 7: Handling and storage

Advice on safe handling	Avoid contact with skin, eyes and clothing. Use in well ventilated areas. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. This product is not classified as a fire-resistant heat transfer fluid. Precautions to avoid sources of ignitions should be taken.
Technical measures/Storage conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from contact with oxidizing materials. Keep in properly labeled containers. Use appropriate containment to avoid environmental contamination. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

SECTION 8: Exposure controls/personal protection

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Terphenyl, hydrogenated	TWA: 0.5 ppm non-irradiated	TWA: 0.5 ppm TWA: 5 mg/m ³	TWA: 0.5 ppm TWA: 5 mg/m ³
Terphenyl	Ceiling: 5 mg/m ³	Ceiling: 1 ppm Ceiling: 9 mg/m ³	IDLH: 500 mg/m ³

Engineering measures	Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Apply technical measures to comply with the occupational exposure limits. If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Personal protective equipment	
Eye/face protection	Goggles Have eye-wash facilities immediately available
Skin and body protection	Wear protective gloves and additional protective clothing as necessary to prevent exposures.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	Clear	
Odor	Characteristic	
Color	Colorless to light yellow	
Odor threshold	No information available	
Property	Values	Remarks • Methods
pH	No information available	
Melting point/freezing point	< -24 °C / -11 °F	Pour point: 1013 hPa
Boiling point/boiling range	342 °C / 648 °F	1013 hPa
Flash point	170 °C / 338 °F 184 °C / 363 °F	DIN EN 22719, Pensky-Martens, Closed cup ASTM D-92, Cleveland Open Cup
Evaporation Rate	No information available	
Specific gravity	1.013	20 °C
Flammability (solid, gas)		
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower flammability limit	No information available	
Vapor pressure	0.00174 hPa	20 °C
Vapor density	No information available	
Water solubility	0.061 mg/l	20 °C
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	> 3160000	
Autoignition temperature	374 °C / 705 °F	1013 hPa ASTM E-659
Decomposition temperature	No information available	
Viscosity, kinematic	133 mm ² /s 29.6 mm ² /s 3.8 mm ² /s	20 °C 40 °C 100 °C
Viscosity, dynamic	No information available	
Explosive properties	Not explosive	
Oxidizing properties	Not oxidizing	

9.2 Other Information

Density	1005 kg/m ³	25 °C
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SECTION 10: Stability and reactivity

Stability	Stable under recommended storage and handling conditions (see section 7).
Incompatible products	Strong oxidizing agents.
Conditions to avoid	This product is not classified as a fire-resistant heat transfer fluid. Precautions to avoid sources of ignitions should be taken.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

SECTION 11: Toxicological information

Acute toxicity

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	Elevated processing temperatures may cause release of vapors which are irritating if inhaled.
Eyes	May cause slight irritation. Not expected to produce significant adverse health effects when recommended use instructions are followed.
Skin	May cause slight irritation. Patch test on human volunteers did not demonstrate sensitization properties. Not expected to produce significant adverse health effects when recommended use instructions are followed.
Ingestion	Not expected to produce significant adverse health effects when recommended use instructions are followed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Terphenyl, hydrogenated	> 10000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 4.7 mg/l (Rat) 4 h
Terphenyl	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 3.8 mg/l (Rat)

Chronic Toxicity

Chronic Toxicity	No known effect.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Sensitization	Patch test on human volunteers did not demonstrate sensitization properties.
Germ cell mutagenicity	Not mutagenic (in vitro, in vivo).
Developmental Toxicity	OECD Test No. 414: Prenatal Development Toxicity Study: Negative.
Target organ effects	None known.

SECTION 12: Ecological information

Acute aquatic toxicity

Product Information

Property	Result	Species
96-hour LC50 - Fish	No data available	No information available
48-hour EC50 - Aquatic invertebrates	No data available	No information available
72-hour EC50 - Algae/aquatic plants	No data available	No information available

Component Information

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Terphenyl, hydrogenated	56 mg/l	> 1.000 mg/l	> 1.34 mg/l
Terphenyl	0.103 mg/l	27 mg/l	22 µg/l

May cause long lasting harmful effects to aquatic life.

Ecotoxicity

Chemical name	log Pow
Terphenyl, hydrogenated	6.5
Terphenyl	5.09

SECTION 13: Disposal considerations**Waste disposal methods**

This material when discarded may be a hazardous waste as that term is defined by the Resource Conservation and Recovery Act (RCRA), 40 CFR 261.24, due to its toxicity characteristic. This material should be analyzed in accordance with Method 1311 for the compound D018 BENZENE. Consult 40 CFR 268.40 or appropriate local regulations for concentration based standards.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other Information

This product meets the criteria for synthetic used oil under the U.S. EPA Standards for the Management of Used Oil (40 CFR 279). Those standards govern recycling and disposal in lieu of 40 CFR 260 -272 of the Federal hazardous waste program in states that have adopted these used oil regulations. Consult your attorney or appropriate regulatory official to be sure these standards have been adopted in your state. Recycle or burn in accordance with the applicable standards. Solutia operates a used fluid return program for certain fluids under these used oil standards. Contact your Sales Representative for details. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

SECTION 14: Transport information

DOT Not regulated

IMDG Not regulated

IATA Not regulated

TDG Not regulated

SECTION 15: Regulatory information**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	no
Chronic Health Hazard	no
Fire Hazard	no
Sudden release of pressure hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Terphenyl, hydrogenated	X	X	X		
Terphenyl	X	X	X		

International Regulations

Chemical name	Carcinogen Status	Exposure Limits
Terphenyl, hydrogenated		Mexico: TWA 0.5 ppm Mexico: TWA 5 mg/m ³
Terphenyl		Mexico: Ceiling 0.5 ppm

Canada

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

WHMIS Hazard Class

Non-controlled

International Inventories

TSCA (US)	Complies
DSL/NDSL (Canada)	Complies
EINECS/ELINCS (EU)	Complies
ENCS (Japan)	-
IECSC (China)	Complies
KECL (Korea)	Complies
PICCS (Philippines)	Complies
AICS (Australia)	Complies

SECTION 16: Other information**NFPA**
HMIS

Health hazard 1
Health hazard 1

Flammability 1
Flammability 1

Stability 0
Physical hazard 0

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Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Material Safety Data Sheet