



Safety Data Sheet: Signal Tech HTF 600 Fluid
Revision Date: January 2nd 2024

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: Signal Tech HTF 600 Fluid
Product Description: Synthetic Heat Transfer Fluid

COMPANY IDENTIFICATION

Supplier: Beacon Lubricants
P.O Box 754
Edinboro, PA 16412

Emergency Telephone: 1-877-734-7334 – Beacon Lubricants, Inc.
Emergency Telephone: 1-800-424-9300 (24 hours) – Chemtrec approval
Website: www.beaconlubricants.com

SECTION 2 HAZARDS IDENTIFICATION

Hazard Classification

Not classified

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: not applicable

Precautionary Statement: not applicable

Other hazards which do not result in GHS classification: None identified.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Percent by Weight
Alkaryl amine	Confidential	1%
Base Oil(s)(*) 1-Decene, homopolymner, hydrogenated	60-100 60-100	See below 68037-01-4



As per paragraph (i) of 29 CFR 1910.1200, formulation is a considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4

FIRST AID MEASURES

INHALATION

Remove exposed person to fresh air if adverse effects are observed.

SKIN CONTACT

Wash with soap and water. Get medical attention if symptoms occur.

EYE CONTACT

Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lens.

INGESTION

Treat symptomatically. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms: See Section 11

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically

SECTION 5

FIRE FIGHTING MEASURES

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: CO₂, Dry chemical or Foam. Water can be used to cool and protect exposed material.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.



Specific hazards arising from the chemical:

When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

Special protective equipment and precautions for firefighters

Special firefighting procedures: No data available.

Special protective equipment for fire-fighters: Recommend wearing self-contained breathing apparatus.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: No data available

Methods and material for containment and cleaning up: Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

Environmental Precautions: Avoid release to the environment. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so.

SECTION 7

HANDLING AND STORAGE

Precautions for safe handling: Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Use grounding and bonding connection when transferring material. In case of spills, beware of slippery floors and surfaces. This material is not a static accumulator but use proper grounding procedures. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment.

Maximum Handling Temperature: Not determined

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. See section 10 for incompatible materials.

Maximum Storage Temperature: Not determined

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for material that can be formed when handling this product: When mists/aerosols can occur the following are recommended: 5 mg/3 – ACGIH TLV (inhalable fraction), 5 mg/m³ – OSHA PEL

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Ingredient name	Exposure limits
Base Oil(s) (*)	NIOSH REL (United States, 10/2013). TWA: 5mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist ACGIH TLV (United States). TWA: 5 mg/m ³ Form: Oil mist. STEL: 10 mg/m ³ Form: Oil mist. OSHA PEL (United States). TWA: 5 mg/m ³ Form: Oil mist.

Appropriate engineering controls: No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required

Eye/face protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection

Hand Protection: Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water.

Other: No data available

Respiratory Protection: Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respiratory. Use respirator with an organic vapor and dust/mist cartridge if the recommended exposure limit is exceeded.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.



SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid

Color: Light Amber

Odor: Slight petroleum

Odor Threshold: N/D

pH: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Flash point: 502°F (256°C) (Pensky-Martens Closed Cup)

Evaporation rate: (nBuAc=1): Nil

Vapor pressure: <0.1 kPa @ 104°F/40°C

Vapor density (Air=1): >1

Relative density: 0.855@ 60°F (15.6°C)

Solubility in water: Insoluble in water

Viscosity: 56 cSt @ 40°C ; 8.4 @ cSt @ 100°C

SECTION 10

STABILITY AND REACTIVITY

REACTIVITY: No data available

STABILITY: Material is stable under normal conditions

CONDITIONS TO AVOID: Do not expose to excessive heat, ignition sources, or oxidizing materials.

MATERIALS TO AVOID: Strong oxidizers. Halogens and halogenated compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may generate smoke, carbon, monoxide, carbon dioxide, and other products of incomplete combustion.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11

TOXICOLOGICAL INFORMATION

Information on likely routes of exposure



Inhalation: No data available.

Ingestion: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity

Oral

Product: ATEmix > 10.000 mg/kg. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Dermal

Product: Not classified for acute toxicity based on available data.

Inhalation

Product: Not classified for acute toxicity based on available data.

Skin Corrosion/Irritation:

Product: Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin. Prolonged or repeated contact may cause irritation.

Remarks: Not classified as a primary skin irritant.

Serious Eye Damage/Eye Irritation:

Product: Remarks: Not classified as a primary eye irritant.

Respiratory sensitization:

No data available

Skin sensitization:

Mineral oil Classification: Not a skin sensitizer. (Read across) Not a skin sensitizer.



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Diphenylamine Classification: Not a skin sensitizer. (Literature)

Specific Target Organ Toxicity - Single Exposure:

Product: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Mineral oil: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Diphenylamine: Exposure to a high concentration of vapor or mist may be irritating.

Aspiration Hazard:

Mineral oil Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Mineral oil Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Other effects:

Diphenylamine Kidney Blood Liver

Chronic Effects

Carcinogenicity:

Product: This product contains mineral oils which are severely refined and not considered carcinogenic. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.



Mineral oil: All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test. This product contains mineral oils which are severely refined and not considered carcinogenic.

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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

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

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity:

Alkaryl amine: This material has not exhibited mutagenic or genotoxic potential in laboratory tests.

Diphenylamine: The Ames Salmonella test for mutagenicity was negative for this product. The mouse micronucleus and the rat hepatocyte UDS tests for genotoxicity were negative for diphenylamine.

Reproductive toxicity:

Diphenylamine: There are conflicting reports in the literature concerning the teratogenicity of diphenylamine. However, because the predominant route of exposure was oral (via gavage or diet) and relatively high dose levels were administered in the studies where positive effects were observed, it would not seem to present a workplace hazard.

Specific Target Organ Toxicity - Repeated Exposure:

Diphenylamine A two year feeding study in rats and dogs of diphenylamine demonstrated liver, kidney and blood cell damage. The effect was observed at levels as low as 100 ppm. A five month feeding study in rats of 1% diphenylamine produced renal cystic disease. A dosedependent increase in Heinz body formation was evident during a 12 week study of 5 to 1000 ppm. The no effect level was at 10 ppm.

Dermal: Target Organ(s): Liver, Kidney

Inhalation: Target Organ(s): Kidney, Liver

Oral: Target Organ(s): Liver, Kidney

SECTION 12**ECOLOGICAL INFORMATION****Ecotoxicity**

Fish

Mineral oil LC 50 (Fathead Minnow, 4 d): > 100 mg/l

Alkaryl amine LC 50 (Zebra Fish, 4 d): > 100 mg/l

Diphenylamine LC 50 (Not reported, 2 d): 2.2 mg/l

Aquatic Invertebrates

Mineral oil EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l

EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l

NOEC (Water flea (Daphnia magna), 21 d): > 10 mg/l

Mineral oil EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l

EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l

NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Alkaryl amine EC 50 (Water flea (Daphnia magna), 2 d): > 100 mg/l

Mineral oil EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l

EC 50 (Water flea (Daphnia magna), 2 d): > 1,000 mg/l

EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l

NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Mineral oil EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l

EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l

NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Mineral oil EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l

EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l

NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Diphenylamine EC 50 (Water flea (Daphnia magna), 2 d): 0.31 mg/l



Toxicity to Aquatic Plants

Mineral oil EC 50 (Green algae (*Scenedesmus quadricauda*), 3 Days): > 100 mg/l

Alkaryl amine EC 50 (Green algae (*Selenastrum capricornutum*), 3 d): 600 mg/l

Diphenylamine EC 50 (Green algae (*Selenastrum capricornutum*), 3 d): 1.51 mg/l

Toxicity to soil dwelling organisms

No data available

Sediment Toxicity

No data available

Toxicity to Terrestrial Plants

No data available

Toxicity to Above-Ground Organisms

No data available

Toxicity to microorganisms

Alkaryl amine EC 50 (Sludge, 0.1 d): > 1,000 mg/l

Mineral oil EC 50 (Sludge, 0.1 d): > 10,000 mg/l

Persistence and Degradability

Biodegradation

Mineral oil OECD TG 301 B, 31 %, 28 d, Not readily degradable.

Mineral oil OECD TG 301 F, 31 %, 28 d, Not readily degradable.

Alkaryl amine OECD TG 301 B, 0 %, 28 d, Not readily degradable.

Mineral oil OECD TG 301 F, 31 %, 28 d, Not readily degradable.

Mineral oil OECD TG 301 F, 31 %, 28 d, Not readily degradable.

Mineral oil OECD TG 301 F, 31 %, 28 d, Not readily degradable.

Inherent Sludge, 30 %, 28 d, Not readily degradable.

Diphenylamine OECD TG 301 D, 26 %, 28 d, Not readily degradable.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Alkaryl amine Bioconcentration Factor (BCF): 1,584.89 (Measured)

Partition Coefficient n-octanol / water (log Kow)

Diphenylamine Log Kow: 3.4 (calculated)

Mobility:

No data available

Other Adverse Effects: No data available.

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal instructions: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.



Since emptied containers retain product residue, follow label warnings even after container is emptied.

Contaminated Packaging: Container packaging may exhibit hazards.

SECTION 14

TRANSPORT INFORMATION

DOT

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

None known.

SECTION 15

REGULATORY INFORMATION

US Federal Regulations

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

Chemical Identity Reportable quantity

Diphenylamine De minimis concentration: 0.1%

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

None known.

SARA 302 Extremely Hazardous Substance

SARA 304 Emergency Release Notification

SARA 311/312 Hazardous Chemical

SARA 313 (TRI Reporting)

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

Inventory Status

Australia (AICS)

All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)

All components are in compliance with the Canadian Environmental Protection Act and are present on the



Domestic Substances List.

China (IECSC)

All components of this product are listed on the Inventory of Existing Chemical Substances in China.

European Union (REACH)

Korea (ECL)

All components are in compliance in Korea.

New Zealand (NZIoC)

All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)

All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear

Wastes Control Act of 1990 (R.A. 6969).

Switzerland (SWISS)

All components are in compliance with the Environmentally Hazardous Substances Ordinance in

Switzerland.

Taiwan (TCSCA)

All components of this product are listed on the Taiwan inventory.

United States (TSCA)

All components of this material are on the US TSCA Inventory.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

SECTION 16

OTHER INFORMATION

HMIS Hazard ID:

Health: 0

Flammability: 1

Physical Hazards: 0

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Updates made in accordance with implementations of GHS requirements.

The information and recommendations contained herein are, to the best of Beacon Lubricants knowledge and belief, accurate and reliable as of the date issued. You can contact Beacon Lubricants to insure that this document is the



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safety data sheet

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