Applied Thermal Control Ltd
39 Hayhill Industrial Estate
Barrow upon Soar, Leicestershire
LE12 8LD, United Kingdom

SAFETY DATA SHEET
HEXID A6 HEAT TRANSFER FLUID

Conforming to Directive 1907/2006/EC

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	**Product Name**	Hexid A4
1.2	**Intended/Recommended Use**	Heat Transfer Fluid
1.3	**Manufacturer**	Applied Thermal Control Limited 39 Hayhill Industrial Estate, Barrow upon Soar, Leicestershire, LE12 8LD. United Kingdom. www.app-therm.com
1.4	**Emergency Telephone Number**	+44(0)1530 839998
1.5	**Email**	sales@app-therm.com

SECTION 2: HAZARDS IDENTIFICATION

2.1	**Classification of the substance or mixture**	The product is not classified as dangerous according to Regulation (EC) No. 1272/2008. This mixture is not classified as dangerous according to Directive 1999/45/EC. This mixture has no classification under CLP
2.2	**Label elements**	Label elements: This product has no label elements Signal Word: No signal word. Hazard statements: No known significant effects or critical hazards. Precautionary statements: Prevention, Response, Storage or Disposal: Not applicable.
2.3	**Other hazards**	PBT: This product is not identified as a PBT/vPvB substance.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1	**Chemical Nature**	Water (CAS 7732-18-5), not classified. Propylene glycol (CAS 57-55-6) (REACH 01-2119456809-23) (EINECS 200-338-0) not classified. Fluorescein (trace) and biocide (trace) not classified.
3.2	**Food Grade**	Food Grade

SECTION 4: FIRST AID MEASURES

	General advice	No special precautions required. Treat symptomatically.
4.1	**Eye Contact**	Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses after a few minutes and continue rinsing. If symptoms persist, call a physician.
4.2	**Skin Contact**	Wash off immediately with plenty of water. If skin irritation persists, call a physician.
4.3	**Inhalation**	Remove to fresh air. If symptoms persist, call a physician.
4.4	**Ingestion**	Rinse mouth with water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5: FIREFIGHTING MEASURES

5.1	**Extinguishing media**	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, foam, dry powder or CO2. Alcohol-resistant foam
5.2	**Unsuitable extinguishing Media**	High volume water jet. Do not use a solid water stream as it may scatter and spread fire.
5.3	**Specific hazards during firefighting**	In fire conditions, toxic decomposition products may be formed (see also section 10). In combustion, emits fumes, smoke, carbon dioxide (CO2) and carbon monoxide (CO). Heating will cause a pressure rise - with severe risk of bursting and explosion, Violent steam generation or eruption may occur upon application of direct water to hot liquids.
5.4	**Advice for firefighters**	In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Keep containers cool by spraying with water if exposed to fire. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Burning fluids may be extinguished by dilution with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	**Personal precautions**	Use personal protective equipment. Avoid contact with skin and eyes. Keep unnecessary and unprotected personnel from entering the area.
6.2	**Precaution to protect the environment**	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.
6.3	**Clean-up procedures**	Contain the spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13). Keep in suitable, closed containers for disposal. Dike the area of spill to prevent spreading and pump liquid to salvage tank. Treat recovered material as described in section 13 Disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Keep container tightly closed. Handle in accordance with good industrial hygiene and safety practice. Spills of these organic materials on hot fibrous insulations may lead to lowering of the auto-ignition temperatures possibly resulting in spontaneous combustion.
7.2	**Conditions for safe storage**	Keep only in the original container.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	**Control Parameters**	Component: Propane-1,2-diol CAS-No. 57-55-6 Other Occupational Exposure Limit Values EH40 WEL, Time Weighted Average (TWA): Total vapour and particulates.150 ppm, 474 mg/m3 EH40 WEL, Time Weighted Average (TWA): Particulate.10 mg/m3 ELV (IE), Time Weighted Average (TWA): Total vapour and particulates.150 ppm, 470 mg/m3 ELV (IE), Time Weighted Average (TWA): Particulate.10 mg/m3
8.2	**Exposure controls/Appropriate engineering controls**	Local exhaust. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
	Personal protective equipment	Respiratory protection: Suitable respiratory protective device Combination filter: A-P2 Filter Type: Combined particulates and organic vapour type Hand protection: Category short time exposure - Break through time> 10 min Protective index: Class 1 When prolonged exposure is expected: Break through time> 120 min Protective index: Class 4 Observe the information of the glove manufacturers on permeability. Protective gloves should be chosen according to Workplace Safety Assessment. Gloves recommended according to EN 374 (protection against chemicals). Material: Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	**Appearance at 20°C**	Fluorescent green clear liquid
9.2	**Odour**	Almost odourless
9.3	**Flash Point**	Boils without flashing
9.4	**Ignition Temperature**	Not available
9.5	**Flammability Limit**	Not available
9.6	**Oxidizing Properties**	Not available
9.7	**Auto flammability**	450°C
9.8	**Density at 25°C**	~1.036g/cm^3
9.9	**pH (as is)**	9.4
9.10	**Boiling point**	102°C
9.11	**Solubility in water**	Miscible
9.12	**Freezing point**	-21°C
9.13	**Specific Heat Capacity**	3.78kJ/kg °K
9.14	**Viscosity, Kinetic, at 25°C**	3.51mPas

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under recommended storage conditions. No dangerous reaction known under conditions of normal use.
10.2	**Chemical stability**	No decomposition if stored and applied as directed. Stable under recommended storage conditions. Hygroscopic.
10.3	**Hazardous reactions**	Hazardous polymerisation does not occur.
10.4	**Conditions to avoid**	Generation of gas from decomposition causes pressure in closed systems. Keep away from direct sunlight. Avoid high temperatures. Avoid temperatures exceeding the decomposition temperature. Avoid UV light.
10.5	**Materials to avoid**	Strong acids, Strong bases, Strong oxidising agents.
10.6	**Hazardous decomposition products**	Aldehydes, Alcohols, Ether, Organic acids.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Toxicity Oral**	LD50: > 20000 mg/kg (rat) This product can present a small hazard if large quantities are swallowed.
11.2	**Inhalation**	LC50: 6.15 mg/l (rat; 4 h; vapour) At ambient temperature the exposure to vapours is minimal due to a low volatility rate. Inhalation may cause irritation to the nose, throat, upper respiratory tract and lungs. No deaths occurred
11.3	**Dermal**	LD50: > 20000 mg/kg (rabbit) Prolonged skin contact is unlikely to result in absorption of harmful amounts. Skin irritation by prolonged exposure is unlikely. Repeated contact may cause flaking and softening of skin
11.4	**Eyes**	Slight irritation is possible. Direct contact with eyes may cause temporary irritation. Corneal injury is unlikely.
11.5	**Sensitisation**	Patch test on human volunteers did not demonstrate sensitisation properties.
11.6	**CMR Carcinogenicity**	Animal testing did not show any carcinogenic effects. Information given is based on data obtained from similar substances.
11.7	**Mutagenicity**	No data available.
11.8	**Reproductive toxicity**	No data available.
11.9	**Specific Target Organ Toxicity**	Single exposure no data available. Repeated exposure no data available.
11.10	**Other toxic properties**	Repeated dose toxicity. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects. Aspiration hazard: Due to its physical properties, the substance does probably not pose any aspiration hazard.
11.11	**Other relevant toxicity information**	Handle in accordance with good industrial hygiene and safety practice.
11.12	**Experience with human exposure**	Health injuries are not known or expected under normal use.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Acute toxicity**	Fish - LC50: 40613 mg/l (Oncorhynchus mykiss; 96 h) (static test) Daphnia and other aquatic invertebrates - LC50: 18340 mg/l (Ceriodaphnia Dubia (water flea); 48 h) (static test) Algae - ErC50: 19000 mg/l (Pseudokirchneriella subcapitata (green algae); 96 h) (Growth inhibition) Bacteria - NOEC: > 20000 mg/l (Pseudomonas putida; 18 h) Chronic toxicity Aquatic invertebrates - NOEC: 13020 mg/l (Ceriodaphnia Dubia (water flea); 7 d) (semi-static test)
12.2	**Persistence and degradability**	Biodegradability 81 % (anaerobic; Exposure Time: 28 d)(OECD 301 F) Readily biodegradable 96 % (anaerobic; Exposure Time: 64 d)(OECD 306.)
12.3	**Bioaccumulative potential**	BCF - 0.09 estimated Low bioaccumulative potential
12.4	**Mobility**	Estimated Koc < 1, indicating very high soil mobility.
12.5	**PBT and vPvB assessment**	Not a PBT or vPvB substance or mixture
12.6	**Other adverse affects**	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

SECTION 13: DISPOSAL CONSIDERATION

13.1	**Waste treatment methods**	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
13.2	**Contaminated packaging**	Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning. Packaging that cannot be cleaned are to be disposed of in the same manner as the product.
13.3	**European Waste Catalogue Number**	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: TRANSPORT INFORMATION

Not dangerous goods for ADR, RID, IMDG, and IATA

14.1	**EEC Regulations**	**UNNO** None. **Class** None. **Packing Group** None. **Road & Rail Transport (ADR & RID)** None. **IMDG** Not Applicable. **ICOA** None.
14.2	**Export commodity code**	39074000 **Classification -** Polycarbonates
14.3	**Weight and dimensions**	5Kg per 5 litre container. 19x14x29cm
14.4	**Manufactured in the United Kingdom**	

SECTION 15: REGULATORY INFORMATION

15.1	**Classification**	Not classified as hazardous to users.
15.2	**CAS No.**	57556
15.3	**Risk or Safety phrases**	None
15.4	**Labelling**	None

SECTION 14: OTHER INFORMATION

Key literature references and sources for data taken from supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet. Other information - The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.