MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	**Heat Conductive Compound**
Revision date	02-21-2012
Version #	01
Product code	120650(0.5 ounce); 107408(4 ounce); and 197007 (5 gallon)
Product use	Heat transfer grease for use when installing filled element sensor used in heat producing equipment.
Manufacturer/Supplier	Honeywell International 1985 Douglas Drive, Golden Valley, MN USA 55422 ecccustomercare@honeywell.com Contact Person: Honeywell Customer Care
Telephone number	1-800-468-1502
Emergency	ChemTrec 1-800-424-9300

2. Hazards Identification

Physical state	Solid.
Appearance	Solid. Soft, malleable.
Emergency overview	CAUTION May cause eye and skin irritation.
OSHA regulatory status	This product is hazardous according to OSHA 29 CFR 1910.1200.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	May cause eye irritation on direct contact.
Skin	May cause skin irritation. Repeated contact with this material may produce dermatitis and oil acne.
Inhalation	Exposure to oil mist/fume/vapor may cause respiratory tract irritation.
Ingestion	Ingestion of this product may cause nausea, vomiting and diarrhea.
Target organs	Eyes. Skin.
Chronic effects	Prolonged or repeated contact may dry skin and cause dermatitis.
Signs and symptoms	Irritation of nose and throat. Irritation of eyes and mucous membranes. Ingestion may cause irritation and malaise.
Potential environmental effects	Components of this product are hazardous to aquatic life. Harmful to aquatic organisms. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	35-56
Residual oils (petroleum), solvent-dewaxed	64742-62-7	14-28
Aluminum	7429-90-5	15-21
Lithium, 12-hydroxyoctadecanoate sebacate complexes	68815-49-6	2-11
stoddard solvent	8052-41-3	1-8
Solvent naphtha (petroleum), light aromatic	64742-95-6	1-3
Stearic acid	57-11-4	1-2
Zinc alkyldithiophosphate	68649-42-3	0-2

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops or persists.

Skin contact Dry skin with paper towel or similar. Wash with soap and water. Get medical attention if irritation develops or persists.

Inhalation Move to fresh air. Get medical attention if discomfort develops or persists.

Ingestion Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Seek immediate medical attention or advice.

Notes to physician Treat symptomatically.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties The product is non-combustible. Will burn if involved in a fire.

Extinguishing media

Suitable extinguishing media Dry chemical, foam, carbon dioxide.

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

Protection of firefighters

Protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

6. Accidental Release Measures

Personal precautions Avoid contact with skin and eyes. Use personal protection as recommended in Section 8 of the MSDS. In case of spills, beware of slippery floors and surfaces.

Environmental precautions Avoid release to the environment. U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

Methods for cleaning up Scrape up spillage or absorb with absorbing material. For waste disposal, see Section 13 of the MSDS.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Storage Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
Stearic acid (57-11-4)	TWA	10 mg/m3	Unspecified.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	TWA	5 mg/m3	Inhalable fraction.
stoddard solvent (8052-41-3)	TWA	100 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum (7429-90-5)	PEL	5 mg/m3	Respirable dust.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
		15 mg/m3	Total dust.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	PEL	5 mg/m3	Mist.
stoddard solvent (8052-41-3)	PEL	2900 mg/m3	
		500 ppm	

Canada - Alberta

Components	Type	Value	Form
Stearic acid (57-11-4)	TWA	10 mg/m3	Unspecified.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Aluminum (7429-90-5)	TWA	5 mg/m3	Pyrophoric powder.
		10 mg/m3	Dust.
stoddard solvent (8052-41-3)	TWA	572 mg/m3	
		100 ppm	

Canada - British Columbia

Components	Type	Value	Form
Stearic acid (57-11-4)	TWA	10 mg/m3	Unspecified.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Aluminum (7429-90-5)	TWA	1 mg/m3	Respirable.
stoddard solvent (8052-41-3)	STEL	580 mg/m3	
	TWA	290 mg/m3	

Canada - Ontario

Components	Type	Value	Form
Stearic acid (57-11-4)	TWA	10 mg/m3	Total dust.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Aluminum (7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Stearic acid (57-11-4)	TWA	10 mg/m3	
stoddard solvent (8052-41-3)	TWA	100 ppm	

Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Aluminum (7429-90-5)	TWA	5 mg/m3	Welding fume.
		10 mg/m3	
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
stoddard solvent (8052-41-3)	TWA	525 mg/m3	
		100 ppm	

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Aluminum (7429-90-5)	TWA	5 mg/m3	Welding fume.
		5 mg/m3	Pyrophoric powder.
		10 mg/m3	Dust.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
stoddard solvent (8052-41-3)	STEL	1050 mg/m3	
		200 ppm	
	TWA	523 mg/m3	

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
		100 ppm	

Exposure guidelines Use personal protective equipment as required. Keep working clothes separately.

Engineering controls No particular ventilation requirements.

Personal protective equipment

Eye / face protection Wear approved safety goggles.

Skin protection Suitable gloves can be recommended by the glove supplier. Wear suitable protective clothing.

Respiratory protection Not normally needed.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Solid. Soft, malleable.

Color Aluminum color.

Odor Mild solvent.

Odor threshold Not available.

Physical state Solid.

Form Soft, malleable.

pH Not available.

Melting point Not available.

Freezing point Not available.

Boiling point Not available.

Flash point > 383 °F (> 195 °C) Cleveland Open Cup

Evaporation rate Not available.

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Vapor pressure Not available.

Vapor density Not available.

Specific gravity 1.03 (Water=1)

Solubility (water) Negligible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

10. Chemical Stability & Reactivity Information

Chemical stability Stable at normal conditions.

Conditions to avoid None under normal conditions.

Incompatible materials Strong oxidizing agents. Halogens.

Hazardous decomposition products Carbon oxides. Aluminum oxides.

Possibility of hazardous reactions Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Test Results
stoddard solvent (8052-41-3)	Acute Dermal LD50 Rabbit: > 5 g/kg
	Acute Inhalation LC50 Rat: > 5500 mg/m3 4 Hours

Components	Test Results
	Acute Oral LD50 Rat: > 5 g/kg

Acute effects Ingestion may cause irritation and malaise.

Local effects May cause skin and eye irritation.

Chronic effects Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

Aluminum (CAS 7429-90-5)	A4 Not classifiable as a human carcinogen.
Stearic acid (CAS 57-11-4)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

stoddard solvent (CAS 8052-41-3)	3 Not classifiable as to carcinogenicity to humans.

Reproductive effects Not classified.

Further information No other specific acute or chronic health impact noted.

12. Ecological Information

Ecotoxicological data

Product	Test Results
Heat Conductive Compound	LC50 Fish: 0.6667 mg/l 96 Hours estimated

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Aquatic toxicity May cause long-term adverse effects in the aquatic environment.

Persistence and degradability Hydrocarbon components will biodegrade in soil, but are relatively persistent in water.

Bioaccumulation / Accumulation No data available.

Partition coefficient (n-octanol/water) Not available.

Mobility in environmental media No data available.

13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

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

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

This product is hazardous according to OSHA 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Aluminum (CAS 7429-90-5)	1.0 %
Zinc alkyldithiophosphate (CAS 68649-42-3)	1.0 % N982

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Aluminum (CAS 7429-90-5)	Listed.
Zinc alkyldithiophosphate (CAS 68649-42-3)	N982 Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CRF 355, Appendix A)

No

Section 311/312 (40 CFR 370)

No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)

Not controlled

Canadian regulations

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Controlled

WHMIS classification

D2B - Other Toxic Effects-TOXIC

WHMIS labeling

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Aluminum (CAS 7429-90-5)	Listed.

Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)	Listed.
stoddard solvent (CAS 8052-41-3)	Listed.
Zinc alkyldithiophosphate (CAS 68649-42-3)	Listed.

US - Massachusetts RTK - Substance: Listed substance

Aluminum (CAS 7429-90-5)	Listed.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)	Listed.
stoddard solvent (CAS 8052-41-3)	Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Aluminum (CAS 7429-90-5)	500 LBS
Zinc alkyldithiophosphate (CAS 68649-42-3)	500 LBS

US - New Jersey RTK - Substances: Listed substance

Aluminum (CAS 7429-90-5)	Listed.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)	Listed.
stoddard solvent (CAS 8052-41-3)	Listed.
Zinc alkyldithiophosphate (CAS 68649-42-3)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Aluminum (CAS 7429-90-5)	Listed.
stoddard solvent (CAS 8052-41-3)	Listed.

Mexico regulations This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 1*
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 1
Flammability: 1
Instability: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.

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