Product Information

Transistor Silicone Grease

Heat Sink Compound

1977

Introduction

A heat conductive material used to coat the bases of power transistors as they are connected to heat sinks. The grease is heat conductive and will draw the heat away from the transistor allowing it to run cooler.

Features / Benefits

Conducts Heat
Nanthe Cleaning
Easy Application

Technical Data	
Color	White, opaque
Specific Gravity	2.4 @ 25˚C per ASTM D70 test method
Penetration, worked (ASD 217)	280 Penetration, unworked after 24 hrs., maximum: 270 Bleed, 24 hrs./200°C (392°F), % maximum: 1.5 Evaporation, 24 hrs./200°C (392°F)
Service Temperature Range	-40°C to 200°C/-40°F to 392°F
Thermal Conductivity, cal/cm/ C/s	1 x 10-3 W/m/ C/s: 0.42
Dielectric Strength, KV/mm (UTE C 26225)	15
Dielectric Strength at 1 kHz (AS D 150)	3.5
Tangent of loss angel at 1 kHz (AS D 150)	5 x 10-3
Volume Resistivity, ohm.cm (UTE C 25215)	1 x 1015
Drop Point, C (F) (AS D 566)	None
Flash Point (TCC Method)	None

Chemical Components

Zinc Oxide, USP……..(1314-13-2) >70%
This material is not considered to be a hazard.
Products of this type are sold to consumers, over the counter

Environmental Policy

Techspray® is committed to developing products that have minimal effects on the environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

Packaging and Availability

Transistor Silicone Grease is available in the following sizes:

1977-DP	4 Ounce Squeeze Tube

MSDS Information

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Section 1. CHEMICAL PRODUCT SECTION

Product Name: Transistor Silicone Grease

Product Number: 1977

General Use:

Product Description:

MANUFACTURER: Tech Spray, Inc.

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Section 2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL	C.A.S. Number	Weight %
Zinc Oxide, USP This material is not considered to be a hazard. Products of this type are sold to consumers, over the counter	1314-13-2	> 70

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

		Exposure Limits 8 Hours TWA (PPM)		
		OSHA PEL	ACGIH TLV	Supplier
Zinc Oxide, USP	Paste form NO HAZARD			

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Section 3. HAZARD IDENTIFICATION

Emergency Overview:

Potential Health Effects:

INHALATION: Product does not contain any volatile compounds.

EYES: Mild irritation.

SKIN: Very mild, if any, irritation.

INGESTION: Nausea and diarrhea possible.

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Section 4. FIRST AID MEASURES

Inhalation:

Not likely to occur, however

Move to fresh air in case of accidental inhalation of vapors. If victim has stopped breathing, give artificial respiration. Call for prompt medical attention.

Eye Contact:
Flush eyes with large amounts of water for 15 minutes or until irritation subsides. If irritation persists, get medical attention.

Skin Contact:
Remove contaminated clothing (including shoes) and wash before reuse. Flush with large amounts of water. Use soap if available. If irritation persists, seek medical attention.

Ingestion:
Do not induce vomiting unless directed by a physician. If conscious and alert, give two glasses of water. Seek medical attention immediately.

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Section 5. FIRE FIGHTING MEASURES

Flash Point & Method: none, T.C.C Meth
Flammable Limits: LEL: NA UEL: NA
Autoignition Temperature:

GENERAL HAZARD:
None

FIRE FIGHTING INSTRUCTIONS:
Fire fighters should wear self contained positive-pressure breathing apparatus.

FIRE FIGHTING EQUIPMENT:
Water, foam, dry chemical, carbon dioxide.

HAZARDOUS COMBUSTION PRODUCTS:
Smoke, fumes and oxides of carbon.

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Section 6. ACCIDENTAL RELEASE MEASURES

LAND SPILL:
Pick up and place in appropriate container.

WATER SPILL:

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Section 7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient
STORAGE PRESSURE: Atmospheric

GENERAL:
Keep container closed when not in use. Store in cool, well ventilated place out of direct sunlight and away from incompatible materials. (See STABILITY AND REACTIVITY Section 10.) Follow all MSD Sheet and Label warnings even after container is emptied.

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Section 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls:

(X) Local Exhaust ventilation acceptable.
( ) Mechanical ventilation recommended.
( ) Use explosion-proof ventilation equipment.
( ) Do not use in confined spaces without mechanical ventilation equipment.
See section 2 for component exposure guidelines.

Personal Protection:
RESPIRATOR:
If concentrations are over the exposure limit and are known, air purifying respirator with Organic Vapor Cartridges may be acceptable. Refer to cartridges for acceptable levels. If concentrations are over exposure limit and are unknown, use a supplied air respirator.

HAND PROTECTION:
(X) Gloves recommended

(X) Solvex	(X) Neoprene
(X) Butyl	(X) Buna
(X) Natural Latex	(X) Cotton/Jersey

EYE PROTECTION:
(X) Safety Glasses ( ) Chemical Goggles ( ) Full Face Shield

OTHER RECOMMENDATIONS:

( ) Rubber Boots ( ) Splash-proof chemical resistant suit/apron

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Density	2.56	pH	NA
Boiling Point	NAC / NAF	% Volatile	0
Freezing Point	NIF	% Solids	100
Vapor Density (Air=1):	NE	Evaporation Rate (H2O=1)	NE
Solubility in Water	0	Viscosity	N/A
Molecular Weight	N/A	Physical State	LIQUID
Non-Exempt VOC (g/l)	NIF	Odor	NIF

Appearance: Opaque white grease with low odor.

Section 10. STABILITY AND REACTIVITY

GENERAL:
STABLE
INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:
None
None
HAZARDOUS DECOMPOSITION:
Forced combustion yields carbon and silicone oxides.

Section 11. TOXICOLOGICAL INFORMATION

SARA SUPERFUND AND REAUTHORIZATION ACT OF 1986
TITLE III Sections 302, 311, 312 and 313:
Section 302 - Extremely hazardous substances (40 CFR 355):
--- None of the chemicals are Section 302 hazards ---

Section 311/312 - Material Safety Data Sheet Requirements (40 CFR 370)
(X) By our hazard evaluation, this product is non-hazardous.
( ) By our hazard evaluation, this product is hazardous. It should be reported under the following EPA hazard.
( ) Immediate (acute) health hazard
( ) Delayed (chronic) chronic health hazard
( ) Sudden release of pressure hazard
( ) Reactive hazard

Section 313 - List of Toxic Chemicals (40 CFC 372)
This product contains the following chemicals (at levels of 1% or greater) which are found on the 313 list of Toxic Chemicals.

CHEMICAL	C.A.S. NUMBER	WEIGHT %
--- None of the chemicals are 313 Toxic Chemicals ---		

TOXIC SUBSTANCE CONTROL ACT (TSCA): All substances are TSCA Listed.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA 40 CFR 261) Subpart C & D:
Refer to Section 11. for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (FORMERLY SECTION 307), 40 CFR 116 (FORMERLY SECTION 311)
This product contains the following chemicals which are listed:

CHEMICAL	C.A.S. NUMBER	WEIGHT %

CLEAN AIR ACT: --- No Information ---

STATE REGULATIONS:
CALIFORNIA PROPOSITION 65:
This product contains the following ingredients which appear on the California proposition 65 list:

CHEMICAL	C.A.S. NUMBER	WEIGHT %
--- None of the chemicals are on the Proposition 65 list ---		

INTERNATIONAL REGULATIONS:
CANADA WHIMS: NIF
EUROPE EINECS NUMBERS: Zinc Oxide; 1314-13-2

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Section 16. OTHER INFORMATION

LABEL INFORMATION:
European risk and Safety Phrases: S2,S22, S38, S36/37/39, R20
European Symbols Needed: HARMFUL
Canadian WHIMS Symbols: NIF