



SAFETY DATA SHEET

Section 1 – Identification

Product Identifier: Polyphen Thermal Dispersant
Recommended Use: Thin Thermal Conducting Coating

Manufacturer / Supplier:
 Tech Line Coatings Industries, Inc
 PO Box 668, 10840 Chapman Hwy Unit A,
 Seymour, TN 92562 USA
 Phone/Fax 1-865-773-0599
 www.techlinecoatings.com

Part Number: TLTD
Restrictions on Use:
 Keep out of reach of children.
 For Industrial Use Only
 Not recommended for use on Medical equipment.
 Not recommended for use on Aviation equipment.

Emergency # N. America +1-800-535-5053
Intl. +1-352-323-3500

Section 2 – Hazards Identification

Signal Word: Danger

Symbols:



Hazard Statements:	GHS Classification:	Category
Highly Flammable Liquid and Vapor	Flammable Liquid	2
Harmful if Swallowed	Acute Toxicity Oral	3
Harmful if Inhaled	Acute Toxicity Dermal	3
Causes Skin Irritation	Acute Toxicity Inhalation	3
Causes Serious Eye Irritation	Skin Irritation	2
Suspected of causing cancer	Eye Irritation	2A
Suspected of damaging fertility or the unborn child – oral.	Carcinogenicity	2
Causes damage to organs (Eyes, Kidney, Liver, Central Nervous System, Heart)	Reproductive Toxicity	2
	Specific Target Organ Toxicity Single Exposure	1

Precautionary Statements:

Keep away from heat / sparks / open flames / hot surfaces. - No Smoking. Ground / bond container and receiving equipment. Use explosion proof electrical / ventilating / lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

In case of fire use alcohol-resistant foam, dry chemical or carbon dioxide

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Wear protective gloves / protective clothing (chemical proof). Wear eye protection and face protection. Wash hands, face and any exposed skin thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat drink or smoke when using this product. Do not breath fumes / mist / vapors / spray. Use only outdoors or in a well ventilated area.

If swallowed: immediately call a poison center / doctor for medical advice. Rinse mouth with water.

If on skin: wash with plenty of water. Call a poison center / doctor if you feel unwell or if irritation occurs. Immediately take off all contaminated clothing and wash it before reuse.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center / doctor for medical advice.

If in eyes: Rinse cautiously in water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advise / attention.

If exposed or concerned: Get medical advise / attention, from a poison center / doctor.

Dispose of Contents / container in accordance with regulations in your area. See section 13 for additional information.

Section 3 – Composition / Information On Ingredients

Component Name	Common Name / Synonyms	CAS#	% of Weight
Methyl Ethyl Ketone	MEK	78-93-3	< 35%
Ethanol	Ethyl Alcohol	64-17-5	< 40%
Phenol	Hydroxybenzene	108-95-2	< 3%
Isopropanol		67-63-0	< 4%
Methanol	Methyl Alcohol	67-56-1	< 5%
Propylene glycol Monomethyl ether acetate		108-65-6	< 2%
C.I. PIGMENT BLACK 7		1333-86-4	< 2%
Molybdenum Disulfide	MoS ₂	1317-33-5	Trade Secret
Xylene		1330-20-7	< .3%
Formaldehyde		50-00-0	0.1 - 0.2%

Section 4 – First Aid Measures**General advise:**

- Consult a physician. Show this Safety Data Sheet to the doctor in attendance. Move out of dangerous area.

After EYE Contact:

- Immediately irrigate with plenty of water for 15 minutes. Obtain medical attention if irritation persists.

After SKIN Contact:

- Remove contaminated clothing without delay. Flush skin thoroughly with water. Do not reuse clothing without laundering.

After INHALATION:

- Administer oxygen if there is difficulty in breathing. Obtain medical attention immediately if necessary.

After SWALLOWING:

- Call a physician immediately, ONLY induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person.

See section 11 for additional information

Notes to Physician: Treat symptomatically.

Section 5 – Fire Fighting Measures

Extinguishing Media:

- Water spray, alcohol resistant foam, CO₂, dry chemical, dry sand. Cool closed containers exposed to fire with water spray.

Special Fire Fighting Procedures:

- Use full protective equipment, including self contained breathing apparatus **Unusual Fire And Explosion Hazards:**
- During emergency conditions, overexposure to decomposition products may cause a health hazard. Hazardous polymerization may take place if exposed to fire conditions. Water runoff can cause environmental damage, dike and collect water used to fight fire.

Specific Hazards Arising from the Chemical:

- Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.
- Containers may explode when heated.

Section 6 – Accidental Release Measures

Methods for Containment and Clean Up

- Turn off all sources of heat or ignition.
- Soak up with inert absorbent material.
- Keep in suitable, marked and closed containers for disposal.
- Use spark-proof tools and explosion-proof equipment.
- Remove sources of ignition.
- Warn other workers of spill.
- Wear protective equipment
- NIOSH Approved Respirator
- Gloves
- Safety Glasses
- Stop leak if you can do so without risk.
- Do not allow material to be released into the environment.
- Retain all contaminated water for removal and treatment. DO NOT flush to sewer.

Additional Information:

- See Section 7 for safe handling information.
- See Section 8 for PPE information
- See Section 13 for disposal information

Section 7 – Handling And Storage

Handling:

Do not breathe vapors or mists from spraying. Avoid contact with skin and eyes. Use with adequate ventilation to maintain exposure levels below established exposure limits. Wear personal protective equipment. If required wear an appropriate NIOSH approved respirator with paint prefilter. Use explosion-proof equipment. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

Storage:

Store in area suitable for flammable liquids. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Protect from oxidizers, inorganic acids, aldehydes, and isocyanates.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Component	ACGIH TLV	OSHA PEL	NIOSH REL
Methyl Ethyl Ketone	200 PPM	200 PPM	200 PPM
Ethanol	1000 PPM	1000 PPM	1000 PPM
Phenol	5 PPM (SKIN)	5 PPM (SKIN)	5 PPM (SKIN)
Isopropanol	200 PPM	400 PPM	400 PPM
Methanol	200 PPM	200 PPM	200 PPM
Propylene glycol Monomethyl ether acetate	50 ppm	50 ppm	No data available
C.I. PIGMENT BLACK 7	3.5 mg/m3 TWA	3.5 mg/m3 TWA	No data available
Molybdenum Disulfide	10 mg/m3	10 mg/m3	No data available
Xylene	TLV: 100 ppm TWA: 150 ppm	TWA: 100 ppm	100 ppm 10 hour shift 200 ppm 10 minutes
Formaldehyde	CEIL 0.3 ppm	TWA 0.75 ppm STEL 2 ppm	0.1 ppm

Engineering Controls: Exhaust ventilation.
Showers
Eyewash stations
Use in a well-ventilated area.

Respiratory Protection: Use NIOSH approved respirator if TWA/TLV limits are exceeded

Protective Gloves: CHEMICAL RESISTANT

Eye Protection: SAFETY GLASSES WITH SIDE SHIELDS OR GOGGLES

Other Protective Equipment: WEAR PROTECTIVE CLOTHING, CHEMICAL RESISTANT OR OTHER PROTECTIVE OUTERWEAR, AVOID CONTACT WITH SKIN OR EYES

Ventilation: Local Exhaust: Use To Maintain Below TWA Limits

Mechanical: Use Non-Sparking Equipment

Work / Hygienic Practices: wash thoroughly after handling product and before eating, drinking or smoking

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : Black

Odor : Strong Alcohol/Solvent
Smell

Odor Threshold: Not Established

pH : Not Established

Melting point / Freezing point: Not Established

Initial boiling point : 131 – 280° F

Flash point : > 16° F

Evaporation Rate: Not Established

Upper/lower flammability or explosive limits: Not Established

Vapor pressure Not Established

Vapor density Not Established

Relative density	7.5 lbs per gallon
Solubility(ies)	Water: poor
Partition coefficient: n-octanol/water	Not Established
Auto-ignition temperature	Not Established
Decomposition temperature	Not Established
Viscosity	Not Established
Total VOC	735 grams/liter

SECTION 10 – STABILITY AND REACTIVITY

Stability:	STABLE
Possibility of hazardous reactions:	Hazardous Polymerization: Will not occur.
Conditions to avoid:	Avoid storage of open containers at elevated temperatures.
Incompatible Materials:	oxidizers, inorganic acids, aldehydes, and isocyanates
Hazardous Decomposition Products:	Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silicon dioxide. Carbon oxides. Formaldehyde.

SECTION 11 – TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Acute Toxicity

Methyl Ethyl Ketone	Oral LD50	LD50 Oral - rat - 2,737 mg/kg
	Inhalation LC50	LC50 Inhalation - mouse - 4 h - 32,000 mg/m ³ LC50 Inhalation - Mammal - 38,000 mg/m ³
	Dermal LD50	LD50 Dermal - rabbit - 6,480 mg/kg
Ethanol	Oral LD50	LD50 Oral - rat - 7,060 mg/kg Remarks: Lungs, Thorax, or Respiration: Other changes.
	Inhalation LC50	LC50 Inhalation - rat - 10 h - 20000 ppm
	Dermal LD50	no data available
Phenol	Oral LD50	LC50 Inhalation - Rat - 4-hr 4,470 ppm (33.0 mg/l) LD50 Oral - rat - 317.0 mg/kg Remarks: Behavioral: Convulsions or effect on seizure threshold. LD50 Oral - rat - 410.0 - 650.0 mg/kg
	Inhalation LC50	LC50 Inhalation - rat - 8 h - 900 mg/m ³
	Dermal LD50	LD50 Dermal - rabbit - 630.0 mg/kg
Isopropanol	Oral LD50	LD50 Oral - rat - 5,045 mg/kg
	Inhalation LC50	LC50 Inhalation - rat - 8 h - 16000 ppm

	Dermal LD50	LD50 Dermal - rabbit - 12,800 mg/kg
Methanol	Oral LD50	LDLO Oral - Human - 143 mg/kg Remarks: Lungs, Thorax, or Respiration:Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. LD50 Oral - rat - 1,187 - 2,769 mg/kg
	Inhalation LC50	LC50 Inhalation - rat - 4 h - 128.2 mg/l LC50 Inhalation - rat - 6 h - 87.6 mg/l
	Dermal LD50	LD50 Dermal - rabbit - 17,100 mg/kg
Propylene glycol Monomethyl ether acetate	Oral LD50	LD50 Oral - rat - 8,532 mg/kg
	Inhalation LC50	No data available
	Dermal LD50	LD50 Dermal - rabbit - > 5,000 mg/kg
C.I. PIGMENT BLACK 7	Oral LD50	Oral LD50 - Rat - > 15400 mg/kg
	Inhalation LC50	No data available
Molybdenum Disulfide	Dermal LD50	Dermal LD50 - Rabbit - > 3 g/kg
	Oral LD50	no data available
	Inhalation LC50	LC50 Inhalation - rat - 4 h - > 2,820 mg/m3 Remarks: Lungs, Thorax, or Respiration:Other changes.
	Dermal LD50	no data available
Xylene	Oral LD50	mouse: LD50 = 2119 mg/kg rat: LD50 = 4300 mg/kg
	Inhalation LC50	rat: LC50 = 5000 ppm/4H
	Dermal LD50	rabbit: LD50 = >1700 mg/kg
Formaldehyde	Oral LD50	No data available
	Inhalation LC50	No data available
	Dermal LD50	No data available

Skin Corrosion/Irritation

Methyl Ethyl Ketone

Skin - rabbit - Skin irritation - 24 h

Ethanol

Skin - rabbit - Irritating to skin. - 24 h

Isopropanol

Skin - rabbit - Mild skin irritation

Phenol

Skin - rabbit - Severe skin irritation - 24 h

Methanol

Skin - rabbit - No skin irritation

C.I. PIGMENT BLACK 7

Skin - rabbit - Result: No skin irritation - 24 h

Xylene

Draize test, rabbit, skin: 100% Moderate;

Draize test, rabbit, skin: 500 mg/24H Moderate;

All other
No data available

Serious Eye Damage/Eye Irritation

Methyl Ethyl Ketone no
data available

Ethanol
Eyes - rabbit - Mild eye irritation - 24 h - Draize Test

Isopropanol
Eyes - rabbit - Eye irritation - 24 h

Phenol
Eyes - rabbit - Severe eye irritation

Methanol
Eyes - rabbit - No eye irritation

C.I. PIGMENT BLACK 7
Eyes – rabbit - Result: No eye irritation

Xylene
Draize test, rabbit, eye: 87 mg Mild;
Draize test, rabbit, eye: 5 mg/24H Severe;

All other
No data available

Respiratory Or Skin Sensitization

No data available

Germ Cell Mutagenicity

Phenol
In vitro tests showed mutagenic effects

Methanol
Genotoxicity in vitro - Ames test - *S. typhimurium* - with and without metabolic activation – negative
Genotoxicity in vitro - in vitro assay - fibroblast - negative Mutation
in mammalian somatic cells.
Genotoxicity in vivo - mouse - male and female - Intraperitoneal – negative

All other
No data available

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Phenol)
1 – Group 1: Carcinogenic to humans (Formaldehyde)
2B - Group 2B: Possibly carcinogenic to humans (C.I. PIGMENT BLACK 7)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Reasonably anticipated to be a human carcinogen (Formaldehyde)
Known to be human carcinogen (Formaldehyde)

OSHA: May Cause Cancer (formaldehyde)

This product contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

C.I. PIGMENT BLACK 7
Carcinogenicity - rat - Inhalation
Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
Limited evidence of carcinogenicity in animal studies

Reproductive Toxicity

Ethanol

Reproductive toxicity - Human - female - Oral

Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects. Effects on Newborn: Drug dependence.

Methanol

Genotoxicity in vitro - Ames test - *S. typhimurium* - with and without metabolic activation – negative
Genotoxicity in vitro - in vitro assay - fibroblast - negative
Mutation in mammalian somatic cells.

Genotoxicity in vivo - mouse - male and female - Intraperitoneal - negative

Xylene

There is ample evidence that xylene produces embryotoxicity (reduced body weight, retarded ossification, retarded kidney development, increased extra rib) and fetotoxicity in mice and rats, but xylene is not considered teratogenic.

All other

No data available

Specific Target Organ Toxicity Single Exposure

Methyl Ethyl Ketone

May cause drowsiness or dizziness.

Isopropanol

May cause drowsiness or dizziness.

Methanol

Causes damage to organs

All other

No data available

Specific Target Organ Toxicity Repeated Or Prolonged Exposure

Phenol

May cause damage to organs through prolonged or repeated exposure.

All other

No data available

Aspiration Hazard

No data available

SECTION 12 – ECOLOGICAL INFORMATION

General Comments: Do not allow material to be released into the environment without proper governmental permits

Environmental Toxicity:

Methyl Ethyl Ketone

Toxicity to fish	mortality NOEC - <i>Cyprinodon variegatus</i> (sheepshead minnow) - 400 mg/l - 96 h LC50 - <i>Pimephales promelas</i> (fathead minnow) - 3,130 - 3,320 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - <i>Daphnia magna</i> (Water flea) - > 520 mg/l - 48 h EC50 - <i>Daphnia magna</i> (Water flea) - 7,060 mg/l - 24 h

Ethanol

Toxicity to fish	No data available
Toxicity to daphnia and other aquatic invertebrates	No data available

Phenol

Toxicity to fish	LC50 - <i>Leuciscus idus</i> (Golden orfe) - 14.00 - 25.00 mg/l - 48 h LC50 - <i>Carassius auratus</i> (goldfish) - 36.10 - 68.80 mg/l - 96 h
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Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 12.00 mg/l - 24 h EC100 - Daphnia magna (Water flea) - 100.00 mg/l - 24 h
Toxicity to algae	EC50 - Chlorella vulgaris (Fresh water algae) - 370.00 mg/l - 96 h
Isopropanol	
Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h EC50 - Algae - > 1,000.00 mg/l - 24 h
Methanol	
Toxicity to fish	mortality LC50 - Lepomis macrochirus (Bluegill) - 15,400.0 mg/l - 96 h NOEC - Oryzias latipes - 7,900 mg/l - 200 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 10,000.00 mg/l - 48 h
Toxicity to algae	Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000.0 mg/l - 96 h
Propylene glycol Monomethyl ether acetate	
Toxicity to fish	mortality LC50 - Salmo gairdneri - 100 - 180 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h
C.I. PIGMENT BLACK 7	
Toxicity to fish	LC50 - Danio rerio (zebra fish) - > 1,000 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 5,600 mg/l - 24 h
Toxicity to algae	static test EC50 - Desmodesmus subspicatus (green algae) - > 10,000 mg/l - 72 h
Molybdenum Disulfide	
Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) – 609 mg Mo/L – 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1680 mg Mo/l - 48 h
Xylene	
Toxicity to fish	Rainbow trout: LC50 = 13.5 mg/L; 96 Hr; Unspecified Goldfish: LD50 = 13 mg/L; 24 Hr; Unspecified Fathead Minnow: LC50 = 46 mg/L; 1 Hr
Toxicity to daphnia and other aquatic invertebrates	EC50 (48 Hr.) water flea = 3.82 mg/L, flow -through conditions
Formaldehyde	
Toxicity to fish	No data available
Toxicity to daphnia and other aquatic invertebrates	No data available
Persistence and degradability	no data available on mixture
Bioaccumulative potential	no data available on mixture
Mobility in soil	no data available on mixture
Other adverse effects	no data available on mixture

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Product :

Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging

Dispose of as unused product.

SECTION 14 – TRANSPORTATION INFORMATION

Hazardous for Shipping: **Yes**

Based on 49 CFR, IATA and IMDG:

UN Number: UN1263
UN Proper Shipping Name: Paint
Hazard Class: 3 **Packing Group:** II

Labels: Flammable Liquid

Placards: Flammable Liquid

SECTION 15 – Regulatory Information

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710: All hazardous ingredients are on the TSCA Chemical Substance Inventory.

Component	CAS#	SARA 302	SARA 313	Massachusetts RTK	Pennsylvania RTK	New Jersey RTK	California Prop 65 list
Methyl Ethyl Ketone	78-93-3	No	No	Yes	Yes	Yes	No
Ethanol	64-17-5	No	No	Yes	Yes	Yes	No
Phenol	108-95-2	Yes	Yes	Yes	Yes	Yes	No
Isopropanol	67-63-0	No	Yes	Yes	Yes	Yes	No
Methanol	67-56-1	No	Yes	Yes	Yes	Yes	No
Propylene glycol Monomethyl ether acetate	108-65-6	No	No	No	Yes	Yes	No
C.I. PIGMENT BLACK 7	1333-86-4	No	No	Yes	Yes	Yes	Yes
Molybdenum Disulfide	1317-33-5	No	No	Yes	Yes	Yes	No
Xylene	1330-20-7	Yes	Yes	Yes	Yes	Yes	No
Formaldehyde	50-00-0	Yes	Yes	Yes	Yes	Yes	Yes

SARA 311 / 312 Hazards: Flammable Hazard ,Acute Health Hazard, Chronic Health Hazard

SECTION 16 – OTHER INFORMATION

Date Prepared: 06/03/2014 **Date**

Updated: 12/29/2017

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