

Section 1. Product and Company Information

Product Name **Low VOC TPO Primer**
 CHEM LINK INC.
 353 E. Lyons Street
 Schoolcraft, MI 49087, USA
 Tel: 269-679-4440
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EMERGENCY CONTACTS

Call Chemtrec: USA: 1-800-424-9300
 International: (703) 527-3887
 Product Use: Primer, mixture
 Chemical Family: Mixture
 SDS Prepared: 12-Oct-15
 SDS Prepared by: CHEM LINK Product Safety Group

Section 2. Hazards Identification**Hazardous classification:**

Flammable Liquids - Category 3
 Skin Corrosion/Irritation - Category 2
 Serious Eye Damage/Eye Irritation - Category 2A
 Skin Sensitization - Category 1A
 Carcinogenicity - Category 2
 Specific Target Organ Toxicity - Single Exposure - Category 3
 Specific Target Organ Toxicity - Repeated Exposure - Category 2 (liver, kidneys)
 Signal Word: **WARNING**

Hazard Statements:

Highly flammable liquid and vapor
 Causes skin irritation
 Causes serious eye irritation
 May cause allergic skin reaction
 Suspected of causing cancer
 May cause drowsiness or dizziness
 May cause damage to organs through prolonged or repeated exposure

Precautionary Statements:**Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Keep container tightly closed
 Keep away from heat/sparks/open flame/hot surfaces - No smoking
 Ground/Bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting equipment
 Take precautionary measures against static discharge
 Use only non-sparking tools
 Use only outdoors or in a well-ventilated area
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapours/spray
 Wash thoroughly after handling
 Contaminated work clothing must not be allowed out of the workplace

Response

In case of fire: Use appropriate media to extinguish
 IF exposed or concerned: Get medical advice/attention
 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER if you feel unwell

Label: Pictograms

Section 2. Hazards Identification Response (continued)**Low VOC TPO Primer**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation or rash occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

Specific treatment (see label)

Storage

Keep container tightly closed

Store in a well-ventilated place. Keep cool

Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Carcinogenicity: This product contains a component known in the state of California to cause Cancer. Toluene

Section 3. Composition / Information on Ingredients**HAZARDOUS INGREDIENTS**

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>Concentration</u>
Solvent naphtha, petroleum, light aliphatic	64742-89-8	10-30%
Isophorone Diisocyanate	Trade Secret	0.5-1.5%
Toluene	108-88-3	3-7%
Chlorinated polypropylene	Trade Secret	0.1-1%
PCBTF	98-56-6	60-100%
Isophorondiamine-isobutyraldimine	Trade Secret	0.1-1%

Section 4. First Aid Measures**Description of Necessary Measures**

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Ingestion

If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects**Acute**

Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. May cause drowsiness or dizziness.

Delayed: May cause allergic skin reaction. Suspected of causing cancer. May cause liver and kidney damage.

Section 5. Fire Fighting Measures

Low VOC TPO Primer

Extinguishing Media**Suitable Extinguishing Media**

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Flammable liquid and vapor.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Fire Fighting Measures

Move container from fire area if it can be done without risk.

Section 6. Accidental release measures**Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate the area. Use non-sparking tools. Use clean non-sparking tools to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. Large spills: Dike for later disposal. Prevent entry into waterways, sewers, basements, or confined areas.

Environmental Precautions

Avoid release to the environment. Collect spillage.

Section 7. Handling and Storage

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat and ignition sources. When using do not smoke. Use non-sparking tools. Ground any equipment used in handling. Wash with plenty of soap and water. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Do not breathe gas, fumes, vapor, or spray. Contaminated work clothing should not be allowed out of the workplace.

Conditions for Safe Storage, Including any Incompatibilities

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

Keep cool

Store locked up

Keep dry. Keep away from heat and ignition sources. Do not puncture or burn containers, even when empty.

Empty containers may contain product residue.

Incompatible Materials

Strong oxidizing agents, acids, bases

Section 8. Exposure Controls / Personal Protection

Low VOC TPO Primer

Component Exposure Limits

Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA 150 ppm STEL; 560 mg/m ³ STEL	
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
PCBTF	98-56-6	
ACGIH:	2.5 mg/m ³ TWA as F (related to Fluorides)	
OSHA (US):	2.5 mg/m ³ TWA as F; 2.5 mg/m ³ TWA dust (related to Fluoride)	
Mexico:	2.5 mg/m ³ TWA LMPE-PPT as F (related to Fluorides)	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment**Eye/face protection**

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing. Wear protective shoes.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9. Physical and Chemical Properties

Appearance	thin green liquid	Physical State	liquid
Odor	Naphthenic distillate	Color	green
Odor Threshold	Not available	pH	Not available
Melting Point	-95 °C(-139° F)	Boiling Point	111 - 139 °C(232-259°F)
Freezing point	Not available	Evaporation Rate	1.4
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	246 °C(475°F)	Flash Point	4 °C(40°F)
Lower Explosive Limit	0.9	Decomposition	Not available
Upper Explosive Limit	10.5	Vapor Pressure	7.4 mmHg
Vapor Density (air=1)	5.7	Specific Gravity (water=1)	Not available
Water Solubility	Insoluble	Partition coefficient: noctanol/water	Not available
Viscosity	<200 cps	Solubility (Other)	Not available
Density	1.177	VOC	<250 g/L

Section 10. Stability and Reactivity

Low VOC TPO Primer

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Take action to prevent static discharges.

Avoid contact with incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11. Toxicological Information**Information on Likely Routes of Exposure****Inhalation**

May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Inhalation Rat >5000 ppm 1 hour

Isophorone Diisocyanate (Trade Secret)

Oral LD50 Rat >20000 mg/kg

Dermal LD50 Rabbit 4000 mg/kg

Inhalation LC50 Rat 5 mg/14 h

Toluene (108-88-3)

Oral LD50 >7000 mg/kg

Dermal LD50 12 - 14 g/kg

Inhalation LC50 30 mg/L

chlorinated homopolymer (Trade Secret)

Oral Rat 5000 mg/kg

PCBTF (98-56-6)

Oral LD50 Rat 13 g/kg

Dermal LD50 Rabbit >2 mL/kg

Inhalation LC50 Rat 33 mg/L 4 h

Section 11. Toxicological Information (continued)

Low VOC TPO Primer

Isophorondiamine-isobutyraldimine (Trade Secret)

Oral Rat 4150 mg/kg [OECD Test Guideline 401]

Dermal Rat >5000 mg/kg [OECD Test Guideline 402]

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

May cause allergic skin reaction.

Delayed Effects

May cause allergic skin reaction. Suspected of causing cancer. May cause liver and kidney damage.

Irritation/Corrosivity Data

Causes skin and eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
PCBTF	98-56-6
ACGIH:	A4 - Not Classifiable as a Human Carcinogen (related to Fluorides)

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

Central nervous system

Specific Target Organ Toxicity - Repeated Exposure

Prolonged exposure may cause liver and kidney damage.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction.

Section 12. Ecological Information**Low VOC TPO Primer**

No known applicable information.

Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Isophorone Diisocyanate	Trade Secret
Fish	LC50 96 h Oncorhynchus mykiss 9.22 mg/L
Invertebrate	EC50 48 h Daphnia magna 6.14 mg/L IUCLID
Toluene	108-88-3
Fish	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
PCBTf	98-56-6
Invertebrate	EC50 48 h Daphnia magna 3.68 mg/L [static] IUCLID

Section 13. Disposal Considerations

Dispose of contents/container in accordance with local/regional/national/international regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Section 14. Transport Information**US DOT Information:****Shipping Name:**ADHESIVES**Hazard Class:** 3**UN/NA #:** UN1133**Packing Group:** II**Required Label(s):** 3**IATA Information:****Shipping Name:**ADHESIVES**Hazard Class:** 3**UN#:** UN1133**Packing Group:** II**Required Label(s):** 3**TDG Information:****Shipping Name:**ADHESIVES**Hazard Class:** 3**UN#:** UN1133**Packing Group:** II

Low VOC TPO Primer

Section 15. Regulatory Information**U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA

Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
TSCA 12 b	Section 4, 1 % de minimus concentration (related to Hydrocarbons, C>4)
PCBTF	98-56-6
TSCA 12 b	Invertebrate: EC50 48 h Daphnia magna 3.68 mg/L IUCLID

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
PCBTF	98-56-6	Yes	No	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	Developmental toxicity , 1/1/1991

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Toluene	108-88-3
	1%

Component Analysis - Inventory

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Isophorone Diisocyanate (Trade Secret)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Toluene (108-88-3)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Chlorinated polypropylene (Trade Secret)

US	CA	EU	AU	PH	JP-ENCS	JP-ISHL	KR-KECI/KECL	KR-TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Low VOC TPO Primer

Section 15. Regulatory Information (continued)

PCBTF (98-56-6)

US	CA	EU	AU	PH	JP- ENCS	JP- ISHL	KR- KECI/KECL	KR- TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No

Isophorondiamine-isobutyraldimine (Trade Secret)

US	CA	EU	AU	PH	JP- ENCS	JP- ISHL	KR- KECI/KECL	KR- TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	No	No	Yes	Yes	No

Section 16. Other Information**HMIS Rating**

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However CHEM LINK INC. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be handled with care. Although we have described herein all of the hazards to which we are currently aware, we cannot guarantee that these are the only hazards which exist. The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States