



## SAFETY DATA SHEET

Christy's® Flex Pro Clear Low VOC Solvent Cement

Date Revised: MAY 2016  
Supersedes: MAR 2015

### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Christy's® Flex Pro Clear Low VOC Solvent Cement

**SYNONYMS:**

**PRODUCT USE:** Low VOC Solvent Cement for Flexible PVC Plastic Pipe

**SUPPLIER and MANUFACTURER** T Christy Enterprises, Inc.

655 East Ball Road, Anaheim, CA 92805-5910

Tel. 1-714-507-3300 (North America)

Tel. 1-714-507-3300 (International)

**EMERGENCY:** Transportation/Medical issues: Tel. 800.535.5053 INFOTRAC

### SECTION 2 - HAZARDS IDENTIFICATION

#### GHS CLASSIFICATION:

Health	Environmental	Physical
Acute Toxicity: Category 4 Skin Corrosion/Irritation: Category 3 Carcinogenicity: Category 2 Eye: Category 2B	Acute Toxicity: None Known Chronic Toxicity: None Known	Flammable Liquid/Aerosol/Gas:

Signal Word: **DANGER**

**GHS LABEL**



**WHMIS CLASSIFICATION:** CONTROLLED PRODUCT  
CLASS B, DIVISION 2 CLASS D, DIVISION 2B

Hazard Statements	Precautionary Statements (See Section 15 for all advisory and required precautions)
H225 Highly flammable liquid and vapor H302 Harmful if swallowed H319 Causes serious eye irritation H332 Harmful if inhaled H335 May cause respiratory irritation H336 May cause drowsiness or dizziness H351 Suspected of causing cancer	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood P210 Keep away from heat, hot surfaces, open flames and other ignition sources. No smoking P261 Avoid breathing fumes/gas/vapours P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ protective/ clothing/ eye protection/ face protection P303 Rinse Mouth P304 + P340 IF INHALED: remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P308+P313 IF exposed or concerned: Get medical advice/attention P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up P501 Dispose of contents/container in accordance with local regulations.

### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Polyvinyl Chloride Resin (PVC)		NON/HAZ		
Tetrahydrofuran (THF)** (Stabilized)	109-99-9	203-726-8	05-2116297729-22-0000	33-48
Methyl Ethyl Ketone (MEK)*	78-93-3	201-159-0	05-2116297728-24-0000	5-16
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	6-20
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	2-18

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.  
\*This chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

### SECTION 4 - FIRST AID MEASURES

**Contact with eyes:** Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.  
**Skin contact:** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.  
**Inhalation:** Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.  
**Ingestion:** Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

### SECTION 5 - FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.  
**Unsuitable Extinguishing Media:** Water spray or stream.  
**Exposure Hazards:** Carbon monoxide, carbon dioxide, hydrogen chloride and smoke  
**Combustion Products:** Carbon monoxide, carbon dioxide, hydrogen chloride and smoke  
**Protection for Firefighters:** Self-contained breathing apparatus or full-face positive pressure airline masks.

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	1	1	2-Moderate
			3-Serious
			4-Severe

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Keep away from heat, sparks and open flame.  
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.  
Prevent contact with skin or eyes (see section 8).  
**Environmental Precautions:** Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.  
**Methods for Cleaning up:** Clean up with sand or other inert absorbent material. Transfer to a closable metal container  
**Materials not to be used for clean up:** Aluminum or plastic containers

### SECTION 7 - HANDLING AND STORAGE

**Handling:** Avoid breathing of vapor, avoid contact with eyes, skin and clothing.  
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.  
Do not eat, drink or smoke while handling.  
**Storage:** Store in ventilated room or shade below 27°C (80°F) and away from direct sunlight.  
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.  
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

### SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL:	
	Tetrahydrofuran (THF) #,##	50 ppm skin	100 ppm	200 ppm	250 ppm	# Mfg. Recommended Allowable Exposure Limit (AEL): 25 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	300 ppm	## Mfg. Recommended STEL: 75 ppm
	Cyclohexanone	20 ppm skin		50 ppm		
	Acetone	500 ppm skin	750 ppm	750 ppm	1000 ppm	

**Engineering Controls:** If ventilated cabinet, enclosure or fume hood is necessary, average airflow should be at least 100 FPM (50.8 cm/sec).

**Monitoring:** Maintain breathing zone airborne concentrations below exposure limits.

**Personal Protective Equipment (PPE):**

**Eye Protection:** Avoid contact with eyes, wear splash proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.

**Skin Protection:** Prevent contact with the skin as much as possible. Polyethylene or PVA coated rubber gloves should be used for frequent immersion.  
Use of latex/nitrile surgical gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

**Respiratory Protection:** Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.  
With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear, medium syrupy liquid	<b>Odor Threshold:</b>	N/D
<b>Odor:</b>	Ethereal	<b>Boiling Range:</b>	57°C (133°F) to 67°C (151°F)
<b>P.H.</b>	Not Applicable	<b>Evaporation Rate:</b>	> 1.0 (BUAC = 1)
<b>Melting/Freezing Point:</b>	-95°C (-139°F) Based on first freezing component: Acetone	<b>Flammability:</b>	Category I
<b>Boiling Point:</b>	57°C (133°F) Based on first boiling component: Acetone	<b>Flammability Limits:</b>	<b>LEL:</b> 2%
<b>Flash Point:</b>	-14°C (7°F) T.C.C. based on THF		<b>UEL:</b> 11.8%
<b>Specific Gravity</b>	@23°C ± 2° (73°F ± 3.6°) Typical 0.940 ± 0.01	<b>Vapor Pressure:</b>	190 mm Hg @ 20°C (68°F): Acetone
<b>Solubility:</b>	Solvent portion completely soluble in water. Resin portion separates out.	<b>Vapor Density:</b>	2.49 (Air = 1)
<b>Partition Coefficient n-octanol/water:</b>	Not Available	<b>Other Data: Viscosity:</b>	Medium bodied
<b>Auto-ignition Temperature:</b>	321°C (609.8°F): THF		
<b>Decomposition Temperature:</b>	Not Applicable		
<b>VOC Content :</b>	When applied as directed, per SCAQMD Rule 1168, Test Method 316A,VOC content is: ≤510 g/l.		

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable
<b>Hazardous decomposition products:</b>	None in normal use. When forced to burn, this product gives off carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride (HCl) and smoke.
<b>Conditions to avoid:</b>	Keep away from heat, sparks, open flame and other ignition sources.
<b>Incompatible Materials:</b>	Caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b>Likely Routes of Exposure:</b>	Inhalation, Eye and Skin Contact
<b>Acute symptoms and effects:</b>	
<b>Inhalation:</b>	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
<b>Eye Contact:</b>	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
<b>Skin Contact:</b>	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
<b>Ingestion:</b>	May cause nausea, vomiting, diarrhea and mental sluggishness.
<b>Chronic (long-term) effects:</b>	None known to humans
<b>Carinogenicity:</b>	
Tetrahydrofuran (109-99-9)	
ACGIH: A3- Confirmed Animal Carcinogen with Unknow Relevance to Humans	
Cyclohexanone (108-94-1)	
ACGIH: A3- Confirmed Animal Carcinogen with Unknow Relevance to Humans	
<b>Toxicity:</b>	LD <sub>50</sub> LC <sub>50</sub>
Tetrahydrofuran (THF)	Oral: 2880 mg/kg (rat) Inhalation 3 hrs. 21,000 PPM (rat)
Methyl Ethyl Ketone (MEK)_	Oral: 3.98 g/kg (rat), Dermal: 8-10 mg/kg (rabbit) Inhalation 4 hrs. 4,000 PPM (rat)
Cyclohexanone	Oral: 1900 mg/kg (rat), Dermal: 1.0 g/kg (rabbit) Inhalation LCLO, 4 hrs, 2,000 PPM (rat)
Acetone	Oral: 9.75 g/kg (rat), Dermal: 20 g/kg (rabbit) Inhalation LCLO, 4 hrs, 16,000 PPM (rat)

<b>Reproductive Effects</b>	<b>Teratogenicity</b>	<b>Mutagenicity</b>	<b>Embryotxicity</b>	<b>Sensitization to Product</b>	<b>Synergistic Products</b>
May cause embryofetal toxicity	Not Applicable	Not Available	Not Applicable	Not Applicable	Not Available

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	Category IV
<b>Mobility:</b>	In normal use, emission of volatile organic compounds (VOC's) to the air takes place. Typically at a rate of ≤ 510 Grams/Liter.
	Minimal other adverse effects include possible ground water contamination from release to soil, sewers, drains or water course.
<b>Degradability:</b>	Biodegradable
<b>BioAccumulation:</b>	Minimal to none.

**SECTION 13 - WASTE DISPOSAL CONSIDERATIONS**

Follow local and national regulations. Consult disposal expert. Can be disposed of by controlled incineration. May be allowed to dry and disposed of as trash. Excessive quantities should not be permitted to enter drains, sewers or water courses. Empty containers should be air dried before disposing.

**SECTION 14 - TRANSPORT INFORMATION**

DOT, IATA, ADR, IMO/MDG SHIPPING INFORMATION			
<b>Proper Shipping Name:</b>	Adhesives	DOT/MDG EXCEPTION: Case quantities of cement in containers of less than one liter may be shipped as LIMITED QUANTITY when properly labeled and marked.	
<b>Hazard Class:</b>	3	ICAQ/IATA May be shipped by air as CONSUMER COMMODITY, ID 8000 when properly packaged, labeled and marked.	
<b>Secondary Risk</b>	None		
<b>Identification Number:</b>	UN 1133		
<b>Packing Group:</b>	II	<b>TDG INFORMATION</b>	
<b>Label Required:</b>	Flammable Liquid	<b>TDG CLASS:</b>	FLAMMABLE LIQUID 3
		<b>SHIPPING NAME:</b>	ADHESIVES (TETRAHYDROFURAN)
		<b>UN NUMBER:</b>	1133, PG II
<b>Marine Pollutant:</b>	NO		

**SECTION 15 - REGULATORY INFORMATION**

<b>Precautionary Label Information:</b>	Highly Flammable, Irritant	<b>Ingredient Listings:</b>	USA TSCA, Europe EINECS, Canada DSL, Australia
<b>Symbols:</b>	F, Xi		AICS, Korea ECL/TCCL, Japan MITI (ENCS)
<b>Risk Phrases:</b>	R-11 Highly Flammable R-20 Harmful by inhalation R-21 Harmful in contact with skin. R-22 Harmful if swallowed.	R-36/37/38 Irritating to eyes, respiratory system and skin. R67 Vapours may cause drowsiness and dizziness	
<b>Safety Phrases:</b>	S-2 Keep out of reach of children. S-7 Keep container tightly closed when not in use. S-9 Keep container in a well-ventilated place. S-15/16 Keep away from heat and sources of ignition. No smoking. S-23 Do not breathe vapor.	S-24/25 Avoid contact with skin and eyes. S-29 Do not empty into drains. S-37 Wear suitable gloves. S-45 If seeking medical advice show physician label or SDS. S-46 Use only in well ventilated areas.	

**SECTION 16 - OTHER INFORMATION**

<b>Specification Information:</b>		
<b>Department issuing data sheet:</b>	Environmental Health & Safety	All ingredients are compliant with the requirements of the European
<b>e-mail address:</b>	<EHSinfo@tchristy.com>	Directive on RoHS (Restriction of Hazardous Substances).
<b>Training necessary:</b>	Yes, training in practices and procedures contained in product literature.	
<b>Reissue date / reason for reissue:</b>	MAY 2016/ Updated Information	
<b>Intended Use of Product:</b>	Adhesive for bonding/cementing PVC plastic pipe and fittings	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.