



SAFETY DATA SHEET

Christy's® Red Hot Blue Glue®
 Christy's® Red Hot Blue Glue® Low VOC PVC Plastic Pipe Cement
 Christy's® Red Hot Clear Glue® Low VOC PVC Plastic Pipe Cement
 Christy's® CLEAR Heavy Bodied Glue® Low VOC PVC Plastic Pipe Cement

Date Revised: OCT 2011
 Supersedes: AUG 2011

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Christy's® Red Hot Blue Glue®
 Christy's® Red Hot Blue Glue® - Low VOC
 Christy's® Red Hot Clear® Glue- Low VOC
 Christy's® Clear Heavy Bodied Glue - Low VOC

SYNONYMS:

PRODUCT USE: Solvent Cement for PVC Plastic Pipe

SUPPLIER and MANUFACTURER: 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 and Medical issues:: Tel. 800.535.5053 INFOTRAK

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	Category III	Flammable Liquid/Aerosol/Gas:	Category 1
Skin Corrosion:	Category 3	Chronic Toxicity:	Category IV		
Skin Sensitization:	YES				
Eye:	Category 2B				

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)	
Highly flammable liquid and vapor	May cause allergic skin irritation or rash	Do not breath vapor	Keep container closed Use in well-ventilated area

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH	CONCENTRATION
			Pre-registration Number	% by Weight
Polyvinyl Chloride Resin (PVC)		NON/HAZ		
Tetrahydrofuran (THF) (Stabilized)	109-99-9	203-726-8	05-2116297729-22-0000	45 - 65
Methyl Ethyl Ketone (MEK)*	78-93-3	201-159-0	05-2116297728-24-0000	5 - 20
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	10 - 30
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	0 - 20

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. HMIS N FPA 0-Minimal

Unsuitable Extinguishing Media: Water spray or stream. Health 2 2 1-Slight

Exposure Hazards: Carbon monoxide, carbon dioxide, hydrogen chloride and smoke Flammability 3 3 2-Moderate

Combustion Products: Carbon monoxide, carbon dioxide, hydrogen chloride and smoke Reactivity 1 1 3-Serious

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks. 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 absorbant material. Transfer to a closable vessel (Metal or polyethylene [PE])
Materials not to be used for clean up: Liquid(s)

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 ## Mfg. Recommended STEL: 75 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	300 ppm	
	Cyclohexanone	20 ppm skin		50 ppm		
	Acetone	500 ppm	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 splashproof 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 Christy's® Red Hot Clear Glue- Low VOC

Appearance:	Clear transparent, medium syrupy liquid	Odor Threshold:	0.1 ppm (Cyclohexanone)
Odor:	Ethereal	Boiling Range:	57°C (133°F) to 67°C (151°F)
P.H.	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-95°C (-139°F) Based on first boiling component: Acetone	Flammability:	Category I
Boiling Point:	57°C (133°F) Based on first boiling component: Acetone	Flammability Limits:	LEL: 2% UEL: 11.8%
Flash Point:	-14°C (-6.8°F) T.C.C. based on THF	Vapour Pressure:	190 mm Hg @ 20°C (68°F): Acetone
Specific Gravity	@23°C ± 2° (73°F ± 3.6°) Typical 0.990 ± 0.04	Vapour Density:	2.49 (Air = 1)
Solubility:	Solvent portion completely soluble in water. Resin portion separates out	Other Data: Viscosity:	Medium bodied
Partition Coefficient n-octanol/water:	Not Available	VOC Content :	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: 510 g/l
Auto-ignition Temperature:	321°C (609.8°F): THF		
Decomposition Temperature:	Not Applicable		

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES Christy's® Red Hot Blue Glue

Appearance:	Blue, medium syrupy liquid	Odor Threshold:	0.1 ppm (Cyclohexanone)
Odor:	Ethereal	Boiling Range:	67°C (151°F)
P.H.	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163°F) Based on first boiling component: THF	Flammability:	Category I
Boiling Point:	67°C (151°F) Based on first boiling component: Tetrahydrofuran (T	Flammability Limits:	LEL: 2% UEL: 11.8%
Flash Point:	-14°C (7°F) T.C.C. based on THF	Vapour Pressure:	143 mm Hg @ 20°C (68°F): THF
Specific Gravity	@23°C ± 2° (73°F ± 3.6°) Typical 0.96 ± 0.04	Vapour Density:	2.49 (Air = 1)
Solubility:	Solvent portion completely soluble in water. Resin portion separates out	Other Data: Viscosity:	Medium bodied
Partition Coefficient n-octanol/water:	Not Available	VOC Content :	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 600 g/l.
Auto-ignition Temperature:	321°C (609.8°F): THF		
Decomposition Temperature:	Not Applicable		

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES Christy's® Red Hot Blue Glue- Low VOC

Appearance:	Blue, medium syrupy liquid	Odor Threshold:	0.1 ppm (Cyclohexanone)
Odor:	Ethereal	Boiling Range:	57°C (133°F) to 67°C (151°F)
P.H.	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-95°C (-139°F) Based on first boiling component: Acetone	Flammability:	Category I
Boiling Point:	57°C (133°F) Based on first boiling component: Acetone	Flammability Limits:	LEL: 2% UEL: 11.8%
Flash Point:	-14°C (-6.8°F) T.C.C. based on THF	Vapour Pressure:	190 mm Hg @ 20°C (68°F): Acetone
Specific Gravity	@23°C ± 2° (73°F ± 3.6°) Typical 0.955 ± 0.04	Vapour Density:	2.49 (Air = 1)
Solubility:	Solvent portion completely soluble in water. Resin portion separates out	Other Data: Viscosity:	Medium bodied
Partition Coefficient n-octanol/water:	Not Available	VOC Content :	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: 510 g/l
Auto-ignition Temperature:	321°C (609.8°F): THF		
Decomposition Temperature:	Not Applicable		

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES Christy's® CLEAR Heavy-Bodied Glue- Low VOC

Appearance:	Clear, thick syrupy liquid	Odor Threshold:	0.1 ppm (Cyclohexanone)
Odor:	Ethereal	Boiling Range:	67°C (151°F)
P.H.	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163°F) Based on first boiling component: THF	Flammability:	Category I
Boiling Point:	67°C (151°F) Based on first boiling component: Tetrahydrofuran (T	Flammability Limits:	LEL: 2% UEL: 11.8%
Flash Point:	-14°C (7°F) T.C.C. based on THF	Vapour Pressure:	143 mm Hg @ 20°C (68°F): THF
Specific Gravity	@23°C ± 2° (73°F ± 3.6°) Typical 0.990 ± 0.04	Vapour Density:	2.49 (Air = 1)
Solubility:	Solvent portion completely soluble in water. Resin portion separates out	Other Data: Viscosity:	Heavy bodied
Partition Coefficient n-octanol/water:	Not Available	VOC Content :	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.
Auto-ignition Temperature:	321°C (609.8°F): THF		
Decomposition Temperature:	Not Applicable		

SECTION 10 - STABILITY AND REACTIVITY

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

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation:	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact:	Vapours slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact:	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion:	May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects: None known to humans

Toxicity:	LD ₅₀	LC ₅₀
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)

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Applicable	Not Applicable	Poss.	Not Applicable	Not Applicable	Not Available

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	Category IV
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place. Typically at a rate of <510 Grams/Litre. Minimal other adverse effects include possible ground water contamination from release to soil, sewers, drains or water course.
Degradability:	Biodegradable
BioAccumulation:	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 be 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/IMDG SHIPPING INFORMATION**

Proper Shipping Name:	Adhesives	DOT/IMDG EXCEPTION: Case quantities of cement in containers of less than one liter may be shipped as LIMITED QUANTITY when properly labeled and marked
Hazard Class:	3	
Secondary Risk:	None	ICAO/IATA May be shipped by air as CONSUMER COMMODITY, ID 8000 when properly packaged, labeled and marked
Identification Number:	UN 1133	
Packing Group:	II	
Label Required:	Flammable Liquid	
Marine Pollutant:	NO	

TDG INFORMATION
 TDG CLASS: FLAMMABLE LIQUID 3
 SHIPPING NAME: ADHESIVES (Methyl Ethyl Ketone, Tetrahydrofuran)
 UN NUMBER: 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant	Ingredient Listings:	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi		
Risk Phrases:	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 R-41 Risk of serious damage to the eyes. R-43 May cause sensitization by skin contact.	
Safety Phrases:	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

Specification Information:

Department issuing data sheet:	Environmental Health and Safety	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
e-mail address:	<EHSinfo@tchristy.com>	
Training necessary:	Yes, training in practices and procedures contained in product literature	
Reissue date / reason for reissue:	OCT 2011 / Updated information	
Intended Use of Product:	Adhesive for bonding/cementing PVC plastic piping 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