

MATERIAL SAFETY DATA SHEET, revised 8 July 2011, printed 8 July 2011

Page 1 of 6

**A-300CL – PVC Adhesive (Clear)****1. PRODUCT AND COMPANY INFORMATION**

Trade name	PVC Adhesive Clear
Product codes	ZGA-300CL, A-300CL
Chemical family	Resin solution
Intended use	Adhesive for welding of PVC
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Company	Colorado Paint (a Swarco Company) 4747 Holly Street Denver, CO 80216; U. S. A.
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Telephone	+1 303-388-9265
Web site	www.swarco.com/americas
Emergency (Chemtrec; 24 h)	1-800-424-9300 (U. S. A. and Canada)

**2. HAZARD IDENTIFICATION****Emergency Overview****OSHA Hazards**

Flammable Liquid, Target Organ Effect, Irritant.

**Target Organs**

Central nervous system, Liver, Kidney

**GHS Classification**

Flammable liquids (Category 2)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 5)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3)

**GHS Label elements, including precautionary statements**

Pictograms:

**Signal word:** Danger**Hazard statements**

H225 Highly flammable liquid and vapour.

H302 + H333 Harmful if swallowed or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 + H336 May cause respiratory irritation, dizziness, and drowsiness.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

**HMIS and NFPA Classification:**

	HMIS	NFPA Hazard
Health	2*	2
Flammability	3	3
Reactivity	--	0
Physical hazard	3	--

**A-300CL – PVC Adhesive (Clear)****Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** May be harmful if swallowed.

**3. COMPOSITION**

Name	Synonym	CAS	EINECS	Index	Concentration
Tetrahydrofuran	THF, Oxolane	109-99-9	203-726-8	603-025-00-0	40-55%
Poly(vinyl chloride) resin	Modified PVC polymer	Proprietary mixture	n/a	n/a	20-35%
Methyl ethyl ketone	Butanone-2	78-93-3	201-159-0	606-002-00-3	10-20%

**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this Material Safety Data Sheet to the attending doctor.

**If inhaled**

Move person to fresh air. If not breathing, give artificial respiration. Obtain proper medical attention.

**If on skin**

Wash off with soap and water. Consult a physician if needed.

**In case of an eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes. Seek medical attention.

**If swallowed**

Do not induce vomiting. Rinse mouth with water. Seek immediate medical attention.

**Most important symptoms and effects, both acute and delayed**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**5. FIRE FIGHTING MEASURES****Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide.

For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Specific hazards**

Flash back possible over considerable distance. Container explosion may occur under fire conditions.

**Special protective equipment for fire fighters**

Wear self-contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides (NO<sub>x</sub>), chlorinated compounds.

**Further information**

Use water spray to cool unopened containers.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate unnecessary personnel to safe areas. Beware of vapors accumulating to form explosive concentrations.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage, and then collect with electrically protected equipment and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition – NO SMOKING. Take measures to prevent the build up of electrostatic charge.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature is 10-25 °C.

**A-300CL – PVC Adhesive (Clear)****8. EXPOSURE CONTROLS AND PERSONAL PROTECTION****Occupational exposure limits** (where established)

Name	CAS	Occupational exposure limits (mg/m <sup>3</sup> )				
		OSHA TLV <sup>(1)</sup>	ACGIH TLV <sup>(2)</sup>	NIOSH PEL <sup>(3)</sup>	OSHA STEL <sup>(4)</sup>	EU <sup>(5)</sup>
Methyl ethyl ketone	78-93-3	590	590	590	885	600
Upper Respiratory Tract irritation. Central Nervous System and Peripheral Nervous System impairment. Substance for which there is a Biological Exposure Index.						
Poly(vinyl chloride) resin	Proprietary mixture	n/a	n/a	n/a	n/a	n/a
No occupational exposure limits have been established. Per manufacturer, the resin is 'not hazardous and toxic chemical'.						
Tetrahydrofuran	109-99-9	590	147	735	735	150
Can be absorbed through skin. There are concerns that dermal absorption will lead to systemic toxicity. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhoea. Central Nervous System impairment. Upper Respiratory Tract irritation. Kidney damage. Confirmed animal carcinogen with unknown relevance to humans. The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histological type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.						

(1) Occupational Safety and Health Administration (OSHA); Threshold Limit Value (8-hour time-weighted average) pursuant to (a) for general industry: 29 CFR 1910.1000 Table Z-1, (b) for construction industry: 29 CFR 1926.55 Appendix A, and (c) for maritime industry: 29 CFR 1915.1000 Table Z. (2) American Conference of Governmental Industrial Hygienists; Threshold Limit Value. (3) National Institute for Occupational Safety and Health; Recommended Exposure Limit. (4) OSHA Short Term Exposure Limit (STEL). (5) European Union exposure limit per Directive 98/24/EC, as amended or UK EH40 Occupational Exposure Limit.

**Ventilation**

Use only where adequate ventilation can be maintained. Use explosion-proof exhaust fans when used in enclosed areas.

**Personal protective equipment****Respiratory protection**

A full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges are recommended as a backup to engineering controls.

**Hand protection**

Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good work hygiene practices. The selected protective gloves have to satisfy the specifications of the standard EN 374.

**Eye protection**

Safety glasses with side shields are required. Face shield are recommended. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Wear impervious, flame retardant antistatic protective clothing.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash your hands thoroughly. Never intentionally inhale the contents. Use only for the intended purpose.

**9. PHYSICAL PROPERTIES****Appearance**

Physical state	Liquid
Color	Clear, hazy
Odor	Strong, irritating, characteristic of tetrahydrofuran

**Safety data**

Boiling point	>60 °C (solvent data)
Freezing point	Not available
Flash point	>-17 °C (solvent data)

**A-300CL – PVC Adhesive (Clear)**

Upper explosion limit	1.8 vol% (solvent data)
Lower explosion limit	11.8 vol% (solvent data)
Solubility in water	Solvents are soluble.
Vapor pressure	213.3 hPa at 25.0 °C (solvent data)
Density	0.8-1.1 g·cm <sup>-3</sup> at 25 °C
Viscosity	70-95 KU (Stormer, at 25 °C)
pH	Not applicable

**10. STABILITY AND REACTIVITY DATA****Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Vapours may form explosive mixture with air.

**Conditions to avoid**

Heat, flames, and sparks. Extremes of temperature and direct sunlight.

**Materials to avoid**

Oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>).

Other decomposition products - no data available

**11. TOXICOLOGICAL DATA****Acute toxicity**

Name	NIOSH IDLH (mg/m <sup>3</sup> )	Oral LD <sub>50</sub> (mg/kg) rat	Inhalation LC <sub>50</sub> (mg/m <sup>3</sup> /4 h) rat	Dermal LD <sub>50</sub> (mg/kg)
Methyl ethyl ketone	5,900	2,737	32,000 (mouse) 38,000 (mammal)	6,480 (rabbit)
Poly(vinyl chloride) resin	n/a	n/a	n/a	n/a
Tetrahydrofuran	5,877	1,650 (rat) 2,300 (guinea pig)	61,000 (3 h) Drowsiness. Lungs, Thorax, or Respiration.	>2,000 (rat)

**Prolonged Exposure**

Name	Skin corrosion / irritation	Serious eye damage / irritation	Respiratory or skin sensitization
Methyl ethyl ketone	Rabbit - skin irritation (24 h)	No data available.	No data available.
Poly(vinyl chloride) resin	No data available.	No data available.	No data available.
Tetrahydrofuran	Rabbit - mild skin irritation (Draize Test)	Rabbit - risk of serious damage to eyes (Draize Test)	Mouse - did not cause sensitization on laboratory animals.

**Germ cell mutagenicity**

Tetrahydrofuran	In vivo tests did not show mutagenic effects.
All other ingredients	No data available.

**Carcinogenicity**

Methyl ethyl ketone	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Poly(vinyl chloride) resin	Mouse – Implant: Tumorigenic. Equivocal tumorigenic agent by RTECS criteria. Tumors at site or application. This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans.
Tetrahydrofuran	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

Tetrahydrofuran	No toxicity to reproduction.
All other ingredients	No data available.

**Teratogenicity**

No data available.

**A-300CL – PVC Adhesive (Clear)****Specific target organ toxicity - single exposure (Globally Harmonized System)**

All other ingredients No data available.

Methyl ethyl ketone May cause drowsiness or dizziness.

Tetrahydrofuran Inhalation: May cause respiratory irritation. May cause drowsiness or dizziness. Nervous system

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available.

**Aspiration hazard**

No data available

**Potential health effects****Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.**Ingestion:** May be harmful if swallowed.**Skin:** May be harmful if absorbed through skin. Causes skin irritation.**Eyes:** Causes eye irritation.**Signs and Symptoms of Exposure**To the best of our knowledge, the chemical, physical, and toxicological properties of this product (a mixture) have not been thoroughly investigated.

The following symptoms have been reported for overexposure to the ingredients: Central Nervous System depression, Cough, chest pain, difficulty in breathing, Gastrointestinal disturbance, narcosis.

**Synergistic effects**

No data available.

**12. ECOLOGICAL DATA****Toxicity**

Name	Fish LC <sub>50</sub> (mg/dm <sup>3</sup> /96 h)	Daphnia magna (Water flea) and other marine invertebrates	Algae (mg/dm <sup>3</sup> )
Methyl ethyl ketone	Mortality NOEC: 400 Cyprinodon variegatus (sheepshead minnow) 3,130 Pimephales promelas	LC50 >520 (mg/dm <sup>3</sup> /48 h) EC50 7,060 (mg/dm <sup>3</sup> /24 h)	n/a
Poly(vinyl chloride) resin	No data available.	No data available.	No data available.
Tetrahydrofuran	2,160 Pimephales promelas (fathead minnow)	n/a	Growth inhibition NOEC: 3,700 mg/dm <sup>3</sup> (Algae)

**Persistence and degradability**

Tetrahydrofuran Expected to be biodegradable.

All other ingredients No data available.

**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**PBT and vPvB assessment**

No data available.

**Other adverse effects**

Data for the entire preparation (a mixture) is not available.

**13. DISPOSAL CONSIDERATIONS****Unused or spoiled product**

The user must determine if it meets applicable definitions of a hazardous waste per 40 CFR 261 and other regulations. Dispose according to the environmental laws. Contact a licensed professional waste disposal service to arrange for appropriate removal. Burn the material in a chemical incinerator equipped with an afterburner and scrubber. Do not incinerate closed containers.

**Container**

Empty packaging may contain product residue and should not be reused. Dispose as of unused product.

**A-300CL – PVC Adhesive (Clear)**

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**14. TRANSPORTATION INFORMATION**

Information provided for guidance purpose only and not meant to be inclusive. Packaging suitability and compliance with regulations must be reviewed prior to shipment.

Quantities smaller than 5.0 litres may be shipped as CONSUMER COMMODITY.

Larger quantities are regulated as follows:

**DOT (U. S. A.); IMDG; IATA**

UN1133; Class 2; Packing Group II

**Proper shipping name**

Adhesive.

**Other information**

Not considered marine pollutant or poison inhalation hazard.

**DOT reportable ingredients:**

Proper Shipping Name	Amount	Reportable quantity
Methyl ethyl ketone	10-20%	2,267 kg (5,000 lb)
Tetrahydrofuran	40-55%	454 kg (1,000 lb)

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**15. REGULATORY INFORMATION**

**OSHA Hazards**

Flammable liquid, Target Organ Effect, Harmful by ingestion, Irritant, Carcinogen.

**TSCA and DSL**

Listed or exempt

**SARA 302**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**SARA 313**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

**California Proposition 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Volatile Organic Compounds**

Below 700 g/l.

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**16. ADDITIONAL INFORMATION**

This safety data sheet complies with 29 CFR 1910.1200 and with EC 1907/2006, as amended.

Unlimited paper copies of this publication may be made by the users for internal purposes only.

Last modified: Friday, 8 July 2011 07:52.

**Disclaimer**

All information and data appearing on this Material Safety Data Sheet are provided in good faith and are believed to be reliable and accurate to the best of our knowledge at the date of publication. Although certain hazards are listed herein, there is no guarantee that these are only risks. None of the provided information is to be considered a warranty or quality specification or all-inclusive and is given only as guidance. It is the user's responsibility to determine the safety of use, handling, storage, transportation, disposal, and suitability for the intended utilisation of the product. Unless otherwise specified, the data provided herein is valid only for the described material and may be not applicable for the product used in combination with any other materials or processes. Colorado Paint Company / Swarco shall not be liable for any damage resulting from handling, contact, use, or inability to use of this product. No guarantee, expressed or implied, is made by Colorado Paint Company / Swarco and the user assumes all risk and responsibility.