

# SAFETY DATA SHEET

CircuitWorks(R) Overcoat Pen (Green, Clear, Blue)

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Identification of the substance or mixture

**Product name** : CircuitWorks(R) Overcoat Pen (Green, Clear, Blue)  
**Chemical name** : Transparent green, clear or blue acrylic coating ink  
**Synonyms** : CW3300G, CW3300GBLK, CW3300B, CW3300C  
**Product type** : Liquid.

### Company/undertaking identification

**Manufacturer** : ITW Chemtronics  
 8125 Cobb Center Drive  
 Kennesaw, GA 30152  
 Tel. 770-424-4888 or toll free 800-645-5244

**Distributor** :

**Importer** : ITW Contamination Control BV  
 Saffierlaan 5  
 VZ-2132 Hoofddorp  
 The Netherlands

Email: info@itw-cc.com

Tel: +31 88 1307 400

FAX: +31 88 1307 499

**e-mail address of person responsible for this SDS** : askchemtronics@chemtronics.com

**Emergency telephone number (with hours of operation)** : Chemtrec - 1-800-424-9300 or collect 703-527-3887

## 2. HAZARDS IDENTIFICATION

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : F; R11  
 Xi; R36  
 R66, R67

**Physical/chemical hazards** : Highly flammable.

**Human health hazards** : Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

See Section 11 for more detailed information on health effects and symptoms.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/preparation** : Preparation

Ingredient name	CAS number	%	EC number	Classification
2-methoxy-1-methylethyl acetate	108-65-6	20 - 40	203-603-9	R10 [1] [2] Xi; R36
propyl acetate	109-60-4	15 - 20	203-686-1	F; R11 [1] [2] Xi; R36
butanone	78-93-3	10 - 20	201-159-0	R66, R67 F; R11 [1] [2] Xi; R36 R66, R67
<b>See Section 16 for the full text of the R-phrases declared above.</b>				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

## 4. FIRST AID MEASURES

### First-aid measures

- Inhalation** : Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See Section 11 for more detailed information on health effects and symptoms.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

- Suitable** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Highly flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7. HANDLING AND STORAGE

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- Packaging materials**
- Recommended** : Use original container.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
2-methoxy-1-methylethyl acetate	<b>EU OEL (Europe, 4/2006). Absorbed through skin. Notes: Indicative</b> Short term limit value: 550 mg/m <sup>3</sup> 15 minute(s). Short term limit value: 100 ppm 15 minute(s). Limit value: 275 mg/m <sup>3</sup> 8 hour(s). Limit value: 50 ppm 8 hour(s).
propyl acetate	<b>ACGIH TLV (United States, 1/2009).</b> STEL: 1040 mg/m <sup>3</sup> 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 835 mg/m <sup>3</sup> 8 hour(s). TWA: 200 ppm 8 hour(s).
butanone	<b>EU OEL (Europe, 4/2006). Notes: Indicative</b> Short term limit value: 900 mg/m <sup>3</sup> 15 minute(s). Short term limit value: 300 ppm 15 minute(s). Limit value: 600 mg/m <sup>3</sup> 8 hour(s). Limit value: 200 ppm 8 hour(s).

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### Exposure controls

- Occupational exposure controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**9. PHYSICAL AND CHEMICAL PROPERTIES**General informationAppearance

**Physical state** : Liquid.  
**Colour** : Clear. Blue.Green.  
**Odour** : Pleasant, ester-like. [Strong]

Important health, safety and environmental information

**Boiling point** : 80°C (176°F)  
**Melting point** : May start to solidify at the following temperature: -86.1°C (-123°F) This is based on data for the following ingredient: butanone. Weighted average: -90.68°C (-131.2°F)  
**Flash point** : Closed cup: Between -18°C (0°F) and 23°C (73°F). (Tagliabue.)  
**Relative density** : Weighted average: 0.9 (Water = 1)  
**Vapour density** : >1 (Air = 1)

**Evaporation rate (butyl acetate = 1)** : >1 compared with butyl acetate

Other information

**Auto-ignition temperature** : Lowest known value: 449.85°C (841.7°F) (propyl acetate).

**10. STABILITY AND REACTIVITY**

**Stability** : The product is stable.  
**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.  
**Materials to avoid** : Highly reactive or incompatible with the following materials:  
oxidizing materials  
**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**11. TOXICOLOGICAL INFORMATION**Potential acute health effects

**Inhalation** : Vapours may cause drowsiness and dizziness.  
**Ingestion** : No known significant effects or critical hazards.  
**Skin contact** : Defatting to the skin. May cause skin dryness and irritation.  
**Eye contact** : Irritating to eyes.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
propyl acetate	LD50 Dermal	Rabbit	>20 mL/kg	-
	LD50 Oral	Rat	9370 mg/kg	-
butanone	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50	Rat	607 mg/kg	-
	Intraperitoneal			
	LD50 Oral	Rat	2737 mg/kg	-
	LC50 Inhalation	Rat	23500 mg/m3	8 hours
	Vapour			

Potential chronic health effects

**Chronic effects** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

**Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
**Ingestion** : No specific data.

## 11. TOXICOLOGICAL INFORMATION

- Skin** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Eyes** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Target organs** : Contains material which causes damage to the following organs: eye, lens or cornea.  
Contains material which may cause damage to the following organs: lungs, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS).

## 12. ECOLOGICAL INFORMATION

**Environmental effects** : No known significant effects or critical hazards.

### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
propyl acetate	-	Acute LC50 60000 to 64000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days - 20.4 mm - 0.148 g	96 hours
butanone	-	Acute EC50 5091000 to 6440000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - LARVAE - <24 hours	48 hours
	-	Acute LC50 >400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 15 mm	96 hours
	-	Acute LC50 5600000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours
	-	Acute LC50 3220000 to 3320000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 31 days - 22 mm - 0.167 g	96 hours
	-	Acute LC50 >520000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <=24 hours	48 hours
	-	Chronic NOEC 400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 15 mm	96 hours
	-	Chronic NOEC <70000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <=24 hours	48 hours

**Conclusion/Summary** : Not available.

### Biodegradability

**Conclusion/Summary** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## 13. DISPOSAL CONSIDERATIONS

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and

**13. DISPOSAL CONSIDERATIONS**

sewers.

**European waste catalogue (EWC)** : waste paint and varnish containing organic solvents or other dangerous substances

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

**14. TRANSPORT INFORMATION**International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADR/RID Class</b>	Not regulated.	-	-	-		-
<b>ADN/ADNR Class</b>	Not regulated.	-	-	-		-
<b>IMDG Class</b>	Not regulated.	-	-	-		-
<b>IATA Class</b>	Not regulated.	-	-	-		-

PG\* : Packing group

**15. REGULATORY INFORMATION**EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

**Hazard symbol or symbols** :



Highly flammable, Irritant

**Risk phrases** : R11- Highly flammable.  
R36- Irritating to eyes.  
R66- Repeated exposure may cause skin dryness or cracking.  
R67- Vapours may cause drowsiness and dizziness.

**Product use** : Industrial applications.

**Europe inventory** : Not determined.

**16. OTHER INFORMATION**

**Full text of R-phrases referred to in sections 2 and 3 - Europe** : R11- Highly flammable.  
R10- Flammable.  
R36- Irritating to eyes.  
R66- Repeated exposure may cause skin dryness or cracking.  
R67- Vapours may cause drowsiness and dizziness.

**Full text of classifications referred to in sections 2 and 3 - Europe** : F - Highly flammable  
Xi - Irritant

History

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**Date of previous issue** : No previous validation.

**Version** : 3

**Prepared by** : Not available.

☑ Indicates information that has changed from previously issued version.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.