

# SAFETY DATA SHEET



Cookson Electronics ASSEMBLY MATERIALS

## Solar Cleaner C 500ml

### 1. Identification of the preparation and of the company

**Product name** : Solar Cleaner C 500ml

**Code** : 59430

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**Manufacturer** : Cookson Electronics  
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**Contact person** : shosken@cooksonelectronics.com

**Material uses** : Heat-transfer medium.

### 2 Hazards identification

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : Not classified.

#### Effects and symptoms

**Skin contact** : Slightly hazardous by the following route of exposure: of skin contact (irritant).  
**Eye contact** : Slightly hazardous by the following route of exposure: of eye contact (irritant).  
**Toxicity data** : Not available.  
**Additional warning phrases** : Safety data sheet available for professional user on request.

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
Europe 2-aminoethanol	141-43-5	1 - 5	205-483-3	Xn; R20/21/22 C; R34
See section 16 for the full text of the R-phrases declared above				

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

The classifications listed, indicate the potential hazards of the ingredients

### 4. First-aid measures

#### First-aid measures

**Inhalation** : Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.  
**Ingestion** : Wash out mouth with water. 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 symptoms occur.

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## 4. First-aid measures

- Skin contact** : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.
- 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 if irritation occurs.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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

## 5. Fire-fighting measures

### Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : In a fire or if heated, a pressure increase will occur and the container may burst. 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.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides  
metal oxide/oxides
- 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** : Avoid breathing vapour or mist. Provide adequate ventilation. 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).
- Large spill** : Prevent entry into sewers, water courses, basements or confined areas. Use a water rinse for final clean-up. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- Small spill** : Use a water rinse for final clean-up. Dispose of via a licensed waste disposal contractor.

## 7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Avoid breathing vapour or mist. Do not reuse container.
- Storage** : Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- Packaging materials**
- Recommended** : Use original container.
- Czech Republic - Storage code** : III

## 8. Exposure controls/personal protection

### Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
<b>Europe</b> 2-aminoethanol	<b>EU OEL (Europe, 4/2006). Absorbed through skin. Notes: Indicative</b> Short term limit value: 7.6 mg/m <sup>3</sup> 15 minute(s). Short term limit value: 3 ppm 15 minute(s). Limit value: 2.5 mg/m <sup>3</sup> 8 hour(s). Limit value: 1 ppm 8 hour(s).
<b>Sweden</b> 2-aminoethanol	<b>AFS 2005:17 (Sweden, 6/2007). Absorbed through skin.</b> STEL: 15 mg/m <sup>3</sup> 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 8 mg/m <sup>3</sup> 8 hour(s). TWA: 3 ppm 8 hour(s).
<b>Denmark</b> 2-aminoethanol	<b>Arbejdstilsynet (Denmark, 3/2008). Absorbed through skin.</b> TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>Norway</b> propane-1,2-diol	<b>Arbejdstilsynet (Norway, 11/2007).</b> TWA: 79 mg/m <sup>3</sup> 8 hour(s). TWA: 25 ppm 8 hour(s).
2-aminoethanol	<b>Arbejdstilsynet (Norway, 11/2007). Absorbed through skin.</b> TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>France</b> 2-aminoethanol	<b>INRS (France, 12/2007). Absorbed through skin. Notes: Regulatory binding exposure limits</b> TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s). STEL: 7.6 mg/m <sup>3</sup> 15 minute(s). STEL: 3 ppm 15 minute(s).
<b>Netherlands</b> 2-aminoethanol	<b>MinSZW Wettelijke Grenswaarden (Netherlands, 4/2008). Absorbed through skin. Notes: Administrative</b> MAC-TGG, 15 min.: 7.6 mg/m <sup>3</sup> 15 minute(s). MAC-TGG, 8 uur: 2.5 mg/m <sup>3</sup> 8 hour(s).
<b>Germany</b> 2-aminoethanol	<b>TRGS900 AGW (Germany, 7/2008). Absorbed through skin.</b> PEAK: 10.2 mg/m <sup>3</sup> 15 minute(s). PEAK: 4 ppm 15 minute(s). TWA: 5.1 mg/m <sup>3</sup> 8 hour(s). TWA: 2 ppm 8 hour(s).
<b>Finland</b> 2-aminoethanol	<b>Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Absorbed through skin.</b> STEL: 7.6 mg/m <sup>3</sup> 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>United Kingdom (UK)</b>	

## 8. Exposure controls/personal protection

propane-1,2-diol	<p><b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b>  TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Particulate  TWA: 474 mg/m<sup>3</sup> 8 hour(s). Form: Sum of vapour and particulates  TWA: 150 ppm 8 hour(s). Form: Sum of vapour and particulates</p>
2-aminoethanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b>  STEL: 7.6 mg/m<sup>3</sup> 15 minute(s).  STEL: 3 ppm 15 minute(s).  TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).  TWA: 1 ppm 8 hour(s).</p>
<b>Austria</b>	
2-aminoethanol	<p><b>GKV_MAK (Austria, 9/2007). Absorbed through skin.</b>  STEL: 7.6 mg/m<sup>3</sup>, 4 times per shift, 15 minute(s).  STEL: 3 ppm, 4 times per shift, 15 minute(s).  TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).  TWA: 1 ppm 8 hour(s).</p>
<b>Switzerland</b>	
2-aminoethanol	<p><b>SUVA (Switzerland, 1/2007). Skin sensitiser. Notes: not temporary</b>  STEL: 10 mg/m<sup>3</sup> 15 minute(s).  STEL: 4 ppm 15 minute(s).  TWA: 5 mg/m<sup>3</sup> 8 hour(s).  TWA: 2 ppm 8 hour(s).</p>
<b>Belgium</b>	
2-aminoethanol	<p><b>Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Absorbed through skin.</b>  STEL: 7.6 mg/m<sup>3</sup> 15 minute(s).  STEL: 3 ppm 15 minute(s).  TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).  TWA: 1 ppm 8 hour(s).</p>
<b>Spain</b>	
2-aminoethanol	<p><b>INSHT (Spain, 1/2008). Absorbed through skin.</b>  STEL: 7.5 mg/m<sup>3</sup> 15 minute(s).  STEL: 3 ppm 15 minute(s).  TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).  TWA: 1 ppm 8 hour(s).</p>
<b>Turkey</b>	
2-aminoethanol	<p><b>TR ISGGM OEL (Turkey, 3/2008). Absorbed through skin.</b>  TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).  TWA: 1 ppm 8 hour(s).  STEL: 7.6 mg/m<sup>3</sup> 15 minute(s).  STEL: 3 ppm 15 minute(s).</p>
<b>Czech Republic</b>	
2-aminoethanol	<p><b>178/2001 (Czech Republic, 12/2007). Absorbed through skin.</b>  STEL: 7.5 mg/m<sup>3</sup> 15 minute(s).  STEL: 3.0075 ppm 15 minute(s).  TWA: 2.5 mg/m<sup>3</sup> 8 hour(s).  TWA: 1.0025 ppm 8 hour(s).</p>
<b>Ireland</b>	
propane-1,2-diol	<p><b>NAOSH (Ireland, 8/2007).</b>  OELV-8hr: 10 mg/m<sup>3</sup> 8 hour(s). Form: particulate  OELV-8hr: 470 mg/m<sup>3</sup> 8 hour(s). Form: vapour and particulates  OELV-8hr: 150 ppm 8 hour(s). Form: vapour and particulates</p>
2-aminoethanol	<p><b>NAOSH (Ireland, 8/2007).</b>  OELV-15min: 15 mg/m<sup>3</sup> 15 minute(s).  OELV-15min: 6 ppm 15 minute(s).  OELV-8hr: 8 mg/m<sup>3</sup> 8 hour(s).  OELV-8hr: 3 ppm 8 hour(s).</p>
<b>Italy</b>	

## 8. Exposure controls/personal protection

2-aminoethanol	<b>Ministero della Salute (Italy, 4/2008). Absorbed through skin.</b> TWA: 1 ppm 8 hour(s). TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). STEL: 3 ppm 15 minute(s). STEL: 7.6 mg/m <sup>3</sup> 15 minute(s).
<b>Estonia</b>	
2-aminoethanol	<b>Sotsiaalminister (Estonia, 10/2007). Absorbed through skin.</b> STEL: 7.6 mg/m <sup>3</sup> 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>Lithuania</b>	
propane-1,2-diol	<b>Del Lietuvos Higienos Normos (Lithuania, 10/2007).</b> TWA: 7 mg/m <sup>3</sup> 8 hour(s).
2-aminoethanol	<b>Del Lietuvos Higienos Normos (Lithuania, 10/2007). Absorbed through skin.</b> STEL: 15 mg/m <sup>3</sup> 15 minute(s). STEL: 6 ppm 15 minute(s). TWA: 8 mg/m <sup>3</sup> 8 hour(s). TWA: 3 ppm 8 hour(s).
<b>Slovakia</b>	
2-aminoethanol	<b>Nariadenie Vlady Slovenskej republiky (Slovakia, 6/2007). Absorbed through skin.</b> CEIL: 7.6 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>Hungary</b>	
2-aminoethanol	<b>EüM-SzCsM (Hungary, 12/2007). Absorbed through skin.</b> TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). PEAK: 7.6 mg/m <sup>3</sup> 15 minute(s).
<b>Poland</b>	
2-aminoethanol	<b>Ministra Pracy i Polityki Społecznej (Poland, 9/2007).</b> STEL: 7.5 mg/m <sup>3</sup> 15 minute(s). TWA: 2.5 mg/m <sup>3</sup> 8 hour(s).
<b>Slovenia</b>	
2-aminoethanol	<b>Uradni list Republike Slovenije (Slovenia, 6/2007). Absorbed through skin.</b> TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>Latvia</b>	
propane-1,2-diol	<b>LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007).</b> TWA: 7 mg/m <sup>3</sup> 8 hour(s).
2-aminoethanol	<b>LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007). Absorbed through skin.</b> TWA: 0.5 mg/m <sup>3</sup> 8 hour(s). TWA: 0.2 ppm 8 hour(s). STEL: 3 ppm 15 minute(s). STEL: 7.6 mg/m <sup>3</sup> 15 minute(s).
<b>Greece</b>	
2-aminoethanol	<b>PD 90/1999 (Greece, 8/2007). Absorbed through skin.</b> STEL: 7.6 mg/m <sup>3</sup> 15 minute(s). STEL: 3 ppm 15 minute(s). TWA: 2.5 mg/m <sup>3</sup> 8 hour(s). TWA: 1 ppm 8 hour(s).
<b>Portugal</b>	

## 8. Exposure controls/personal protection

2-aminoethanol

Instituto Português da Qualidade (Portugal, 3/2007).

STEL: 6 ppm 15 minute(s).

TWA: 3 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** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**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. Recommended: None assigned.

**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. <1 hours (breakthrough time): disposable vinyl

**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. Recommended: safety glasses with side-shields EN 166 1F

**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. Recommended: overall

**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 information

#### Appearance

**Physical state** : Liquid.  
**Colour** : Clear.  
**Odour** : Odourless.

### Important health, safety and environmental information

**pH** : 7 [Conc. (% w/w): 100%]  
**Relative density** : 1.06  
**Solubility** : Easily soluble in the following materials: cold water and hot water.  
**VOC content** : 0 % (w/w)

## 10. Stability and reactivity

<b>Stability</b>	: The product is stable.
<b>Conditions to avoid</b>	: No specific data.
<b>Materials to avoid</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Potential acute health effects

<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: Acute oral toxicity (LD50) Rat >2000 mg/Kg No known significant effects or critical hazards.
<b>Skin contact</b>	: No known significant effects or critical hazards.
<b>Eye contact</b>	: No known significant effects or critical hazards.
<b>Acute toxicity</b>	

### Over-exposure signs/symptoms

<b>Target organs</b>	: Contains material which may cause damage to the following organs: upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
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## 12. Ecological information

### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
2-aminoethanol	-	Acute LC50 300 to 1000 mg/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 0.3 g	96 hours
	-	Acute LC50 >200 mg/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - Fingerling	96 hours
	-	Acute LC50 150 to 196 mg/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - Yolk-sac fry	96 hours
	-	Acute LC50 2070000 to 2370000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days - 18.3 mm - 0.09 g	96 hours
	-	Acute LC50 337500 ug/L	Fish - Western mosquitofish - Gambusia affinis - 20 to 30 mm	96 hours
	-	Acute LC50 329160 ug/L	Fish - Bluegill - Lepomis macrochirus - 40 to 50 mm	96 hours
	-	Acute LC50 170000 ug/L Fresh water	Fish - Goldfish - Carassius auratus - 3.3 g	96 hours
	-	Acute LC50 >100000 ug/L	Crustaceans - Common shrimp,	48 hours

## 12. Ecological information

Marine water sand shrimp -  
Crangon crangon  
- Adult

### Biodegradability

- Other adverse effects** : No known significant effects or critical hazards.  
**AOX** : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

## 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 sewers.
- 16 03 06 organic wastes other than those mentioned in 16 03 05
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

## 14. Transport information

### International transport regulations

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

- Risk phrases** : This product is not classified according to EU legislation.  
**Product use** : Industrial applications.

### Other EU regulations

**Additional warning phrases** : Safety data sheet available for professional user on request.

### France

**Professional disease or diseases** : 2-aminoethanol RG 49, RG 49bis

### Germany

**Hazard class for water** : 1 Appendix No. 4  
**Technical instruction on air quality control** : TA-Luft Class I - Number 5.2.5: 3.6%

### Italy

**Emission control directive** : Not classified.

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## 16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe : R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.  
R34- Causes burns.

Full text of classifications referred to in sections 2 and 3 - Europe : C - Corrosive  
Xn - Harmful

### History

Date of printing : 20/07/2011.  
Date of issue : 23/09/2010.  
Date of previous issue : 26/08/2010.  
Version : 5  
Prepared by : Not available.

✔ Indicates information that has changed from previously issued version.

### References

The Health and Safety At Work Act 1974, section 6.  
Control of Substances Hazardous to Health (CoSHH) Regulations 2002 and its amendments.

Preparation contains solely TSCA and REACH 1907/2006 listed substances.

This safety data sheet has been prepared in accordance with the requirements of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 which implement EC Directives 1999/45/EC and 2001/58/EC and their amendments.

### Notice to reader

*To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes 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 used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*