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## 1. Identification of the substance

Chemical Name: CarbonCount (Liquid Scintillation Cocktail)  
Product Code: CCA  
Supplier: Meridian  
5 West Street  
EPSOM  
Surrey KT18 7RL  
Telephone: 01372 749783  
Fax: 01372 720265

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## 2. Composition

Solution containing the following components:

70-90% 1,2,4-trimethylbenzene	CAS # 95-63-6
20-30% propylene glycol mono-methyl ether	CAS # 107-98-2
0.1-1% 2,5-diphenyloxazole	CAS # 92-71-7
0.1-1% 1,4-bis(4-methyl-alpha-styryl)benzene	CAS # 13280-61-0

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## 3. Regulatory Information

Classification & Symbols



### Risk

R 10 Flammable.

R 20 Harmful by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Phrases

### Safety Phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S61 Avoid release to the environment.

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#### 4. First Aid Measures

**General information:**

Immediately remove any contaminated clothing and wash with copious amounts of soapy water.

**Eye contact:**

May cause irritation, tearing, redness and blurred vision. Conjunctivitis is possible with continuous exposure. All eye injuries from chemicals should be seen by a doctor.

**Skin contact:**

May cause irritation, reddening, drying, itching and cracking. Defatting agent. Systemic toxicity may be possible with continuous exposure.

**Ingestion:**

May cause irritation nausea, vomiting, diarrhea and central nervous system depression. Aspiration into the lungs may result in a severe injury.

**Inhalation:**

May cause irritation and burning. May cause central nervous system depression such as drowsiness, dizziness, fatigue and blurred vision. Extreme exposures may result in unconsciousness, coma, respiratory arrest and possible death.

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#### 5. Fire Fighting Measures

Suitable extinguishing media:

Dry powder, water spray, foam.

Specific hazards during fire fighting/

Special protective equipment:  
apparatus.

Fire-fighters should wear self contained breathing  
Responders should wear protective clothing to prevent  
skin contact. Move containers from fire area. If unable to  
move, cool sealed containers with water.

Unusual fire/explosion information:

Vapours may travel long distances to ignition sources and  
flash back.

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#### 6. Accidental Release Measures

**Personal precaution procedures to be followed in case of leak or spill:**

Evacuate area. Shut off all sources of ignition.

**Procedure(s) of personal precaution(s):**

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Methods for cleaning up:**

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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**7. Handling and Storage****Handling:**

Wash thoroughly after handling. Use only in a well ventilated area. Do not breath vapour, mist or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.

**Storage:**

Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from direct sunlight. Do not eat, smoke or drink in storage areas.

**Engineering controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use non-sparking tools and provide adequate ventilation to keep airborne concentrations low.

**8. Exposure controls and personal protection****Engineering Controls**

Safety shower and eye bath. Use non-sparking tools. Mechanical exhaust required.

**General Hygiene Measures**

Wash thoroughly after handling. Wash contaminated clothing before reuse.

**CAS # 95-63-6****Exposure Limits**

	Source	Type	Value
<b>European Union</b>	OEL	OEL	100 mg/m <sup>3</sup>
			20 ppm
<b>Denmark</b>	OEL	TWA	120 mg/m <sup>3</sup>
			25 ppm
<b>Norway</b>		OEL	100 mg/m <sup>3</sup>
			20 ppm
<b>United Kingdom</b>	OEL	TWA	125 mg/m <sup>3</sup>
			25 ppm

**CAS # 107-98-2****Exposure Limits**

	Source	Type	Value
<b>European Union</b>	OEL	OEL	375 mg/m <sup>3</sup>
			100 ppm
<b>Denmark</b>	OEL	TWA	185 mg/m <sup>3</sup>
			50 ppm
<b>Norway</b>		OEL	180 mg/m <sup>3</sup>

**Material Safety Data Sheet**

50 ppm

**United Kingdom**

OEL	OEL	375 mg/m <sup>3</sup>
		100 ppm
OEL	STEL	1,120 mg/m <sup>3</sup>
		300 ppm

**Personal Protective Equipment**

**Respiratory Protection:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

**Hand Protection:** Compatible chemical-resistant gloves.

**Eye Protection:** Chemical safety goggles.

**9. Physical and chemical properties**

Molecular formula:	Solution
Physical state:	Liquid
Colour:	Colourless
Odour:	Characteristic
Solubility in water:	<10ppm
Vapour pressure:	5 mm Hg at 20 deg C (68 deg F)
Boiling point:	168 deg C (335 deg F)
Autoignition temp:	Not available
Flash point:	36 deg C (97 deg F)
Density at 20 deg C:	0.90 g/cm <sup>3</sup>

**10. Stability and Reactivity**

**Chemical stability:** Stable

**Conditions to avoid:** Excess heat

**Incompatibilities with other materials:** Strong oxidizing materials

**Hazardous decomposition products:** Combustion can produce oxides of carbon.

**Hazardous reactions:** Stable under normal conditions

**11. Toxicological Information****CAS# 95-63-6**

Single or repeated overexposure to this chemical may affect the kidneys, liver, blood, respiratory and nervous systems. These effects may be aggravated by pre-existing medical conditions. Repeated or prolonged overexposure may cause permanent brain damage. This compound may cause adverse reproductive and/or developmental effects.

**Inhalation:**

TCLo: 20mg/m<sup>3</sup>/24 hour/17 week-intermittent: kidney, ureter, bladder (rat)

LC<sub>50</sub>: 8mg/m<sup>3</sup>/4 hour (rat)

**Oral:**

LD<sub>50</sub>: 5,000mg/kg (rat)

TDL<sub>o</sub>: 10g/kg/4 week-Intermittent (rat)

TDL<sub>o</sub>: 6,400mg/kg/8 week-Intermittent: Peripheral nervous system (rat)

**Intraperitoneal:**

LDLo: 1752mg/kg (rat)

LDLo: 1788 mg/kg/ (guinea pig)

**Carcinogenicity:**

Listed by NTP: No

IARC: No

OSHA: NO

**CAS # 107-98-2**

Acute Toxicity: LC<sub>50</sub> (Inhalation): Rat 10,000 ppm 5H

LD<sub>50</sub> (Intraperitoneal): Rat 3,720 mg/kg

Subcutaneous: LD<sub>50</sub> Rat 7,800 mg/kg

Remarks: Lungs, Thorax, or Respiration:Dyspnea.

Behavioral: Convulsions or effect on seizure threshold.

Behavioral: Ataxia.

Intravenous LD<sub>50</sub> Rat 4,200 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Behavioral: Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Oral LD<sub>50</sub> Mouse 11,700 mg/kg

Remarks: Lungs, Thorax, or Respiration:Dyspnea.

Behavioral:Ataxia. Behavioral:Convulsions or effect on seizure threshold.

Intravenous LD<sub>50</sub> Mouse 5300 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Oral LD<sub>50</sub> Rabbit 5,700 mg/kg

Skin LD<sub>50</sub> Rabbit 13,000 mg/kg

Subcutaneous LD<sub>50</sub> Rabbit 5 g/kg

Intravenous LD<sub>50</sub> Rabbit 1,200 MG/KG

**Irritation Data**

Skin: Rabbit 500 mg [Remarks: Open irritation test]

Eyes: Rabbit 500 mg, 24H [Remarks: Mild irritation effect]

**12. Ecological information****CAS# 95-63-6**

This compound is expected to rapidly volatilize from surface water. The estimated bioconcentration factor (439) and high volatility of this material indicates that bioaccumulation of the chemical will not be significant.

LC<sub>50</sub>: 7.72 mg/l/96 hour: Fathead minnow (*pimephales promelas*)

**CAS # 107-98-2**

No data available.

**13. Disposal Considerations**

Recommended disposal, including packaging is by incineration in a suitable installation when in accordance with local regulations.

**14. Transport Information****DOT regulations:**

**Hazard class:** 3

**Identification number:** UN1993

**Packing group:** III

**Proper shipping name (technical name):** FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene)

**Label 3**

**Land transport ADR/RID (cross-border):**

**ADR/RID class:** 3 Flammable liquids

**Danger code (Kemler):** 30

**UN-Number:** 1993

**Packaging group:** III

**Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene)

**Maritime transport IMDG:**

**IMDG Class:** 3

**UN Number:** 1993

**Label 3**

**Packaging group:** III

**EMS Number:** F-E,S-E

**Marine pollutant:** No

**Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene)



**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 3

**UN/ID Number:** 1993

**Label** 3

**Packaging group:** III

**Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene)

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## 15. Regulatory Information

### European/International Regulations

European labeling in accordance with EC Directives.

**Hazard Symbols:** Irritant, Flammable

**Risk Phrases:** R 10 Flammable.

R 20 Harmful by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Safety Phrases** S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S61 Avoid release to the environment.

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## 16. Other Information

The information above is believed to be accurate and represents the best currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.

Users should carry out their own investigation to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third part or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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