Material Safety Data Sheet

Canada
English

Section 1. Chemical product and company identification

Product name **PCS Scintillation Cocktail, 4 x 4 L**

Catalogue Number NPCS104

Material uses Industrial applications: Analytical chemistry. Research.
Product type Liquid.
Validation date 17 June 2009
Print date 18 June 2009

Supplier
GE Healthcare UK Ltd
Amersham Place
Little Chalfont
Buckinghamshire HP7 9NA
England
+44 0870 606 1921

In case of emergency

US	ChemTrec (US)	1-800-424-9300
Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state Liquid.
Odor Aromatic.
Emergency overview WARNING!

FLAMMABLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Flammable liquid. May be harmful if absorbed through skin or if swallowed. Severely irritating to the eyes and respiratory system. Irritating to skin. Keep away from heat, sparks and flame. Do not ingest. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Contains material that may cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes Severely irritating to eyes. Risk of serious damage to eyes.
Skin Harmful in contact with skin. Irritating to skin.
Inhalation Severely irritating to the respiratory system.
Ingestion Harmful if swallowed.

Potential chronic health effects

Chronic effects Contains material that may cause target organ damage, based on animal data.
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.
Target organs Contains material which may cause damage to the following organs: blood, kidneys, liver, gastrointestinal tract, skin, central nervous system (CNS), eye, lens or cornea.
Inhalation Adverse symptoms may include the following:
respiratory tract irritation
coughing
Ingestion No specific data.
Skin Adverse symptoms may include the following:
irritation
redness

Eyes
Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure
Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

Name		CAS number	% by weight
Xylene	1330-20-7	60 - 70	
Glycol ethers		1 - 5	

Section 4. First aid measures

Eye contact
Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation
Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion
Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders
No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Fire fighting measures

Flammability of the product
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. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable
Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable
Do not use water jet.

Special exposure hazards
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 combustion 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.

Section 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor 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 spilled 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
Stop leak if without risk. Move containers from spill area. Approach 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 spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or 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.

Section 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 vapor 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 grounding 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Product name	Exposure limits
Xylene	**CA Alberta Provincial (Canada, 10/2006).** 15 min OEL: 651 mg/m³ 15 minute(s). 15 min OEL: 150 ppm 15 minute(s). 8 hrs OEL: 434 mg/m³ 8 hour(s). 8 hrs OEL: 100 ppm 8 hour(s). **CA British Columbia Provincial (Canada, 7/2007).** STEL: 150 ppm 15 minute(s). TWA: 100 ppm 8 hour(s). **CA Ontario Provincial (Canada, 3/2007).** STEV: 650 mg/m³ 15 minute(s). STEV: 150 ppm 15 minute(s). TWAEV: 435 mg/m³ 8 hour(s). TWAEV: 100 ppm 8 hour(s). **CA Quebec Provincial (Canada, 12/2006).** STEV: 651 mg/m³ 15 minute(s). STEV: 150 ppm 15 minute(s). TWAEV: 434 mg/m³ 8 hour(s). TWAEV: 100 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.

Engineering measures

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, vapor 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.

Personal protection

Respiratory

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.

Hands

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.

Eyes

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

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.

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.

Section 9. Physical and chemical properties

Physical state Liquid.

Flash point Closed cup: 27.2°C (81°F)

Flammable limits Lower: 1%
Upper: 7%

Color Colorless.

Odor Aromatic.

Volatility 61 to 75% (w/w)

VOC 610 to 750 (g/l).

Solubility Not available.

Section 10. Stability and reactivity

Stability The product is stable.

Materials to avoid Reactive or incompatible with the following materials:
oxidizing materials

Hazardous polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions of reactivity Non-flammable in the presence of the following materials or conditions: shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Not considered to be a product presenting a risk of explosion.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Intraperitoneal	Rat	2459 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Subcutaneous	Rat	1700 mg/kg	-

Conclusion/Summary Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Xylene	A4	3	-	-	-	-

Synergistic products Not available.

Section 12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Xylene	-	Acute LC50 8.5 ppm Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio - Adult	48 hours
	-	Acute LC50 13500 to 15034 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 0.9 g	96 hours
	-	Acute LC50 13500 to 19200 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.9 g	96 hours
	-	Acute LC50 13400 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 31 days - 18.4 mm - 0.077 g	96 hours
	-	Acute LC50 13300 to 16114 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 1.1 g	96 hours
	-	Acute LC50 12000 to 16114 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 1.1 g	96 hours
	-	Acute LC50 12000 to 13762 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 1.1 g	96 hours
	-	Acute LC50 8600 to 9591 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 0.9 g	96 hours

	-	Acute LC50 8500 ug/L Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 8200 to 10032 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.6 g	96 hours
	-	Acute LC50 3300 to 4093 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.6 g	96 hours
	-	Acute LC50 13500 to 16100 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 1.1 g	96 hours

Conclusion/Summary Not available.

Octanol/water partition coefficient Not available.

Bioconcentration factor Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Waste disposal The generation of waste should be avoided or minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification Not available.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1993	FLAMMABLE LIQUIDS, N.O.S. (xylene)	3	III		-
TDG Classification	UN1993	FLAMMABLE LIQUIDS, N.O.S. (xylene)	3	III		-
Mexico Classification	UN1993	FLAMMABLE LIQUIDS, N.O.S. (xylene)	3	III		-
ADR/RID Class	UN1993	FLAMMABLE LIQUIDS, N.O.S. (xylene)	3	III		-
IMDG Class	UN1993	FLAMMABLE LIQUIDS, N.O.S. (xylene)	3	III		-
IATA Class	UN1993	FLAMMABLE LIQUIDS, N.O.S. (xylene)	3	III		-

Section 15. Regulatory information

WHMIS (Canada)
Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists
CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Xylene
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Canada inventory
Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

EU regulations

Hazard symbol or symbols

Risk phrases
R10- Flammable.
R20/21- Harmful by inhalation and in contact with skin.
R38- Irritating to skin.

Safety phrases
S36/37- Wear suitable protective clothing and gloves.

International regulations

International lists
Australia inventory (AICS): Not determined.
China inventory (IECSC): Not determined.
Japan inventory (ENCS): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

Section 16. Other information

The customer is responsible for determining the PPE code for this material.
Indicates information that has changed from previously issued version.

History

Date of printing	18 June 2009	**Date of previous issue**	18 July 2006
Date of issue	17 June 2009	**Version**	5

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.