

SAFETY DATA SHEET

To comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

CLOR-N-SOIL 50 PCB SCREENING KIT

SECTION 1 – COMPANY IDENTIFICATION

Manufacturer: Dexsil Corporation
One Hamden Park Drive
Hamden, CT 06517

Emergency Telephone Number:
USA (800) 424-9300 (CHEMTREC)
INT'L (703) 527-3887

Telephone Number: (203) 288-3509

Email: info@dexsil.com

Product Description: The CLOR-N-SOIL product line is a field Test Kit for screening soil for the presence of PCBs.

SECTION 2 – HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Ampule 1 (gray color)

| | | | |
|-------------------------|---|--------------------|--|
| Combustible Liquid;H227 | Combustible Liquid. In contact with water releases flammable gases which may ignite spontaneously. | Skin Corr. 1B;H314 | Causes severe skin burns and eye damage. |
| Water-react. 1;H260 | | Eye Dam. 1;H318 | Causes serious eye damage. |

Ampule 2 (blue-dot)

| | | | |
|-------------------|------------------------------|------------------------|---|
| Flam. Liq. 3;H226 | Flammable liquid and vapor. | Repr. 1B;H360FD | May damage fertility. May damage the unborn child. |
| Acute Tox. 4;H302 | Harmful if swallowed. | | |
| Carc. 2;H351 | Suspected of causing cancer. | Aquatic Chronic 2;H410 | Very toxic to aquatic life with long lasting effects. |

Ampule 3 (brown-dot)

No applicable GHS categories.

Ampule 4 (red-green color)

| | | | |
|-------------------|------------------------------------|-------------------|--------------------------------|
| Flam. Liq. 2;H225 | Highly Flammable liquid and vapor. | Eye Irrit. 2;H319 | Causes serious eye irritation. |
|-------------------|------------------------------------|-------------------|--------------------------------|

Ampule 5 (colorless)

| | | | |
|----------------------|-----------------------------|-------------------|--------------------------------|
| Aquatic Acute 1;H400 | Very toxic to aquatic life. | Eye Irrit. 2;H319 | Causes serious eye irritation. |
|----------------------|-----------------------------|-------------------|--------------------------------|

Aqueous Solution

| | | | |
|---|--|-----------------|----------------------------|
| Corrosive 1;H290 May be corrosive to metals | | Eye Dam. 1;H318 | Causes serious eye damage. |
| Skin Irrit. 2;H315 Causes skin irritation | | | |

Soil Extract Solution

No applicable GHS categories.

Drying Column

No applicable GHS categories.

2.2. Label elements

Ampule 1 (gray color)



Danger

H227 Combustible liquid.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

[Prevention]:

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

P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231+232 Handle under inert gas. Protect from moisture.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P331 Do NOT induce vomiting.

P335+334 Brush off loose particles from skin. Immerse in cool water / wrap in wet bandages.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:

P402+404 Store in a dry place. Store in a closed container.

P403+235 Store in a well ventilated place. Keep cool.

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

Ampule 2 (blue-dot)



Danger

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H351 Suspected of causing cancer.

H360 May damage fertility. May damage the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

[Prevention]:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P241 Use explosion-proof electrical / ventilating / light / equipment.

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P284 Wear respiratory protection.

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P308+313 IF exposed or concerned: Get medical advice / attention.

P320 Specific treatment is urgent (see information on this label).

P330 Rinse mouth.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

P391 Collect spillage.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

Ampule 3 (brown-dot)

No applicable GHS categories.

Ampule 4 (red-green color)**Danger**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

[Prevention]:

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

P241 Use explosion-proof electrical / ventilating / light / equipment.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

Ampule 5 (colorless)**Warning**

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

[Prevention]:

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313 If eye irritation persists: Get medical advice/ attention.

P391 Collect spillage.

[Storage]:

No GHS storage statements.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

Aqueous Solution**Danger**

H290 May be corrosive to metals

H315 Causes skin irritation.

H318 Causes serious eye damage.

[Prevention]:

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. No NOT induce vomiting.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P362 Take off contaminated clothing and wash before reuse.

[Storage]:

No GHS storage statements

[Disposal]:

No GHS disposal statements

Soil Extract Solution

No applicable GHS categories.

Drying Column

No applicable GHS categories.

For additional information on toxicity, please refer to Section 11.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

The CLOR-N-SOIL 50 PCB Screening Kit consists of one test tube containing two ampules, one test tube containing two ampules and an aqueous solution, a separate ampule and a vial of extraction solvent, and a plastic drying column.

| Component | Contents | CAS# | EC# | % liquid |
|----------------------------|------------------------|-------------|------------|-----------------|
| Ampule 1 (gray color) | Sodium | 7440-23-5 | 231-132-9 | 0.29% |
| | dispersed in oil | 64742-46-7 | 265-148-2 | 1.18% |
| Ampule 2 (blue-dot) | Naphthalene in | 91-20-3 | 202-049-5 | 0.20% |
| | Diglyme Solution | 111-96-6 | 203-924-4 | 0.61% |
| Ampule 3 (brown-dot) | Mercuric Nitrate | 10045-94-0 | 233-152-3 | 0.01% |
| | in water | 7732-18-5 | 231-791-2 | 3.21% |
| Ampule 4 (red-green color) | Ethanol | 64-17-5 | 200-578-6 | 1.68% |
| Ampule 5 (colorless) | Organo-Sulfur Compound | 128-04-1 | 204-876-7 | 2.56% |
| Aqueous Solution | Sulfuric Acid | 7664-93-9 | 231-639-5 | 1.01% |
| | in water | 7732-18-5 | 231-791-2 | 33.54% |
| Soil Extract Solution | Butyl Diglyme | 112-73-2 | 204-001-9 | 37.58% |
| | in water | 7732-18-5 | 231-791-2 | 8.53% |
| Drying Column | Florisil | 1343-90-4 | 215-681-1 | 9.60% |
| | | | | 100.00% |

SECTION 4 — FIRST AID MEASURES

First Aid: In case of contact with reagents, rinse well with water.

Eye Contact: For all kit components, flush eyes with large amounts of water for 15 minutes. Seek medical attention.

Skin contact: Flush with large amounts of water. Use soap and water to wash away organic components.

Inhalation: In case of inhalation, remove to fresh air.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

SECTION 5 — FIRE AND EXPLOSION HAZARD

| | | | |
|-------------|--------------------|---------|--------|
| Flash Point | Ampule 1 | 143.6°F | 62.0°C |
| | Ampule 2 | 135°F | 57.2°C |
| | Ampule 3 | N/A | N/A |
| | Ampule 4 | 48°F | 8.89°C |
| | Ampule 5 | N/A | N/A |
| | Extraction Solvent | 244°F | 118°C |
| | Drying Column | None | None |

Flammable Limit Unknown

Extinguishing Media DO NOT USE WATER ON A SODIUM FIRE. Dry chemical, foam, CO₂

Special Fire Fighting Procedures Do not use water. Wear SCBA. Avoid breathing sodium oxide fumes that will form on combustion.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Protection Chemical safety glasses and rubber gloves

Spills and Leaks *Ampule 1 - Sodium Ampule*
Cover with dry soda ash or salt. Store in a well-ventilated area away from moisture.

Ampule 2 - Naphthalene/Diglyme Ampule
Absorb completely and dispose of as organic waste.

Ampule 3 - Mercuric Nitrate Ampule
Absorb completely and flush area with water.

Ampule 4 - Ethanol Ampule
Solvent absorbent recommended for spills. Flush area with water..

Ampule 5 - Disposal Ampule
Absorb completely and flush area with water.

Aqueous Solution
Absorb completely and flush area with water.

Soil Extraction Solvent
Absorb completely and dispose of as organic waste.

SECTION 7 – HANDLING AND STORAGE

Protective equipment Wear appropriate safety equipment when performing the test on site.

Storage Store test kits in a cool, dry place. Check expiration date prior to performing test.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls None required

Personal Protective Equipment (PPE)

Respiratory protection None required during normal use.

Ventilation Perform test only in a well-ventilated area.

Protective gloves Always wear rubber gloves when performing the CLOR-N-SOIL 50 test
Viton gloves are recommended for use with PCB's.

Eye protection Wear safety glasses.

General Hygiene Measures Avoid contact with skin, eyes and clothing. Wash hands after running tests.

SECTION 9 – PHYSICAL/CHEMICAL CHARACTERISTICS

| <i>Property</i> | <i>Ampule 1</i> | <i>Ampule 2</i> | <i>Ampule 3</i> | <i>Ampule 4</i> | <i>Ampule 5</i> | <i>Aq. Sol'n</i> | <i>Soil Ext.</i> | <i>Dry. Col.</i> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| Boiling Pt. °C | N/A | 168 | 100 | 78 | 100 | >100 | 256 | N/A |
| Vapor Pressure mm Hg @ 21°C | N/A | 1.7 | 18 | 44 | 16 | 18 | <0.01 | N/A |
| Solubility in Water | reacts | 75% | complete | miscible | miscible | complete | 0.3% | none |
| Specific Gravity | 0.86 | 0.95 | 1.02 | 0.79 | 1.17 | 1.09 | 0.88 | 1.2 |
| Percent Volatile | None | 100 | none | 99 | none | 100 | 100 | 0 |
| Evaporation Rate Butyl Acetate =1 | N/A | 0.36 | N/A | 2.7 | N/A | N/A | <0.01 | 0 |
| Appearance | gray | colorless | colorless | red-green | colorless | colorless | colorless | white crst. |
| Odor | none | etherlike | none | pleasant | sulfur-like | none | ether-like | none |

N/A = not available

SECTION 10 – REACTIVITY DATA

Chemical Stability All components are stable under recommended storage conditions.

Conditions to Avoid Do not expose broken sodium ampule to moisture. Keep from strong oxidizers.

Hazardous Decomposition Products Sodium will form hydrogen and sodium oxide when moisture is present.
Diglyme may form peroxides on exposure to air. Other solutions are stable.

Hazardous Polymerization Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenicity

NTP: Yes IARC: Yes Z List: No OSHA Reg: No

This product contains Cadmium, which is listed as a NTP anticipated human carcinogen and an IARC probable human carcinogen (Groups 2A and 2B). Diglyme may cause teratogenic or mutagenic effects and cause harm to the unborn child.

Toxicity Data

| <u>COMPONENT</u> | <u>CONTENTS</u> | <u>TLV / (PEL)</u> |
|----------------------------------|--------------------------------|---|
| Ampule 1(gray color, yellow-dot) | [Sodium] dispersed in oil | [2 mg/m ³ / (2 mg/m ³)] |
| Ampule 2 (blue-dot) | [Naphthalene] in Diglyme Sol'n | [50 mg/m ³ / (50 mg/m ³)] 5 ppm |
| Ampule 3(brown-dot) | [Mercuric Nitrate] in water | [0.1 mg/m ³ / (0.1 mg/m ³)] |
| Ampule 4(red-green color) | Ethanol | 1900 mg/m ³ / (1900 mg/m ³) |
| Ampule 5(colorless) | Organo-Sulfur Comp'd | 1 mg/m ³ / (1 mg/m ³) |
| Aqueous Sol'n | [Sulfuric Acid] in water | [1 mg/m ³ / (1 mg/m ³)] |
| Soil Extract | [Butyl Diglyme] & Water | Not Regulated |
| Drying Column | Florisil | N/A |

SECTION 12 – ECOLOGICAL INFORMATION

Naphthalene: Ecotoxicity in water (LC50): 305.2 ppm 96 hour(s) [Trout].

Ethanol: Ecotoxicity: Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified) Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

Organo-Sulfur Compound: Ecotoxicity: Fish: Rainbow trout: LC50 = 2.6 mg/L; 96 Hr.; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 = 0.508 mg/L; 15 minutes; Microtox test.

Mercuric Nitrate: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

Pipette: Dispose of in accordance with all applicable federal, state and local environmental regulations.

Test Tube 1: Contains soil sample and extract. Dispose of as organic waste in accordance with all applicable federal, state, and local environmental regulations.

Test Tube 2: Contains reacted oil sample and organic liquid and may contain residual PCB's. Dispose of as organic waste in accordance with applicable federal, state and local environmental regulations.

Test Tube 3: Upon completion of test including the addition of ampule 5, contents pass US EPA TCLP test. Dispose of in accordance with all applicable federal, state and local environmental regulations.

SECTION 14 — TRANSPORTATION INFORMATION

| DOT | | |
|---|--|---------|
| Proper Shipping Name: | None | |
| Domestic Highway or Rail Transport Only: | As originally packaged by Dexsil Corporation, under Competent Authority Approval CA-1996100010, packages are approved for transportation by domestic highway or rail transport only. Packaging conforms to conditions and limitations specified in 49 CFR 173.4. | |
| IATA | | |
| Proper Shipping Name: | Alkali Metal Dispersion | Ethanol |
| UN Number: | 1391 | 1170 |
| Hazard Class: | 4.3 | 3 |
| Packing Group | I | II |

SECTION 15 — REGULATORY INFORMATION

SARA Listed: Mercuric nitrate, naphthalene/diglyme component, Organo-sulfur compound, and ethanol are identified on SARA Sec. 313.

TSCA Inventory Items: Mercuric nitrate, naphthalene/diglyme component, Organo-sulfur compound, and ethanol.

CERCLA Listed: Mercuric nitrate, naphthalene, Organo-sulfur compound and ethanol.

EINECS: Components of this product are on the European Inventory of Existing Commercial Chemical Substances.

SECTION 16 — OTHER INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and danger of these chemicals for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. These chemicals may interact with other substances. Since the potential uses are so varied, Dexsil cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Dexsil warrants that the chemicals meet the specifications set forth on the label. DEXSIL DISCLAIMS ANY OTHER WARRANTIES; EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, IT'S MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE. The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Dexsil will periodically revise this Material Safety Data Sheet. CHEMTREC emergency telephone number is to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to the Customer Service Dept. at 1-203-288-3509.

For additional information, contact Dexsil.

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