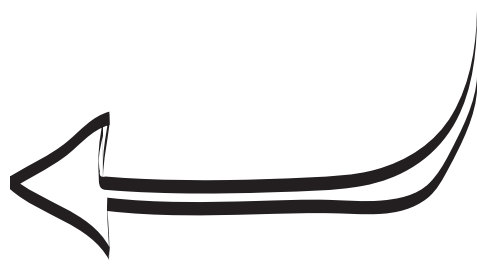




Please use the bookmarks on the left to find the appropriate MSDS for your concentration level.



# MATERIAL SAFETY DATA SHEET

Customer's Use



Date Issued: 06/03/2008

MSDS No: ICC-02695

Date-Revised: 11/17/2011

Revision No: 2

## INTERCOOL Biogreen Concentrate

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** INTERCOOL Biogreen Concentrate

**GENERAL USE:** Heat Transfer Fluid

**PRODUCT CODE:** 66430

**PRODUCT FORMULATION NAME:** INTERCOOL Biogreen Concentrate

**ACTIVE INGREDIENT(S):** 1,3-Propanediol

#### MANUFACTURER

Interstate Chemical Company, Inc.  
Corporate Headquarters-Hermitage  
2797 Freedland Road  
Hermitage, PA 16148

**Emergency Contact:** F. James Corbett,  
Director of Quality & EH&S

**E-Mail:** 724-981-3771

**Product Stewardship:** 800-422-2436

**Alternate Emergency Phone:** 724-981-3771

**Transportation:** 800-422-2436

**Service Number:** 800-422-2436

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

800-ICC-CHEM

**COMMENTS:** Dispose of in accordance with all applicable local, state, and federal regulations. For assistance with your waste management/environmental service needs including waste disposal and recycling, please contact Interstate Chemical Environmental Services at 800-422-2436 ext. 1703 or email us at

[environmentalservices@interstatechemical.com](mailto:environmentalservices@interstatechemical.com)

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Substance may cause skin and eye irritation.

**IMMEDIATE CONCERNS:** May be irritating to eyes, respiratory system and skin.

#### POTENTIAL HEALTH EFFECTS

**EYES:** May cause irritation.

**SKIN:** Minor skin irritation and penetration may occur.

**INGESTION:** Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems

**INHALATION:** Vapor inhalation is generally not a problem unless heated or misted.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name   | Vol. % | CAS      |
|-----------------|--------|----------|
| 1,3-Propanediol | > 90   | 504-63-2 |
| Green Dye       | < 1    |          |

### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**SKIN:** Remove contaminated clothing. Wash with soap and water. Get medical attention.

**INGESTION:** Not expected to require first aid measures. Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** (210°F) ASTM D56

**FLAMMABLE LIMITS:** 2.6 to 12.5

**AUTOIGNITION TEMPERATURE:** (700°F)

**EXTINGUISHING MEDIA:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

**OTHER CONSIDERATIONS:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Move exposed containers from fire area, if it can be done without risk. Use water to keep fire-exposed containers cool.

### 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Absorb liquid and place in sealed container for disposal.

**LARGE SPILL:** Ventilate area of leak or spill. Remove all sources of ignition. Contain and recover liquid when possible. Do not flush to sewer.

## ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** When released into water, this material is expected to readily biodegrade.

**LAND SPILL:** When released into the soil, this material is expected to readily biodegrade.

**AIR SPILL:** When released into the air, this material is expected to have a half-life between 1 and 10 days.

**GENERAL PROCEDURES:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Protect container from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

**HANDLING:** Store in adequate storage area at ambient temp.

**STORAGE:** Store in a cool dry place. Keep from freezing.

**SHELF LIFE:** Greater than one year when stored in its original container at the recommended storage temperature with the bungs closed.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses with side shields (or goggles) and a face shield.

**SKIN:** Wear suitable protective clothing and gloves.

**RESPIRATORY:** Not required for properly ventilated areas. If there is potential for inhalation of vapor or mist, use an appropriate NIOSH approved respirator. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**PROTECTIVE CLOTHING:** Wear protective gloves and clean body-covering clothing. Chemically resistant protective clothing and boots may be required.

**WORK HYGIENIC PRACTICES:** Establish good personal hygiene and work practices. Always wash hands and face before eating, drinking or smoking. Provide safety shower and eye wash station in work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid

**ODOR:** Odorless

**APPEARANCE:** Clear, green liquid

**COLOR:** Green

**pH:** 8.0 to 9.5

**PERCENT VOLATILE:** Not Determined

**VAPOR PRESSURE:** ~ 0.129 mmHg at (77°F)

**VAPOR DENSITY:** 2.6 (Air=1)

**BOILING POINT:** ~ (370°F)

**FREEZING POINT:** < -60°C Freezing Point Chart

**MELTING POINT:** < -60°C

**FLASHPOINT AND METHOD:** (210°F) ASTM D56

**SOLUBILITY IN WATER:** Miscible

**EVAPORATION RATE:** < 1 (n-Butyl Acetate=1) Room Temperature

**DENSITY:** ~ 8.74 lbs/gal at (60°F)

**SPECIFIC GRAVITY:** ~ 1.048 (water=1) at 20°C

**VISCOSITY #1:** ~ 20 Centipoise at (68°F)

**COMMENTS:** The information in this section is calculated from specific known information about this product. This information should not be used as exact test results or specifications. The information is provided as typical properties for this product.

## 10. STABILITY AND REACTIVITY

**STABLE:** Yes

**HAZARDOUS POLYMERIZATION:** No

**STABILITY:** Stable under ordinary conditions of use and storage.

**POLYMERIZATION:** Product will not undergo polymerization.

**CONDITIONS TO AVOID:** Oxidizing materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide and carbon monoxide may form when heated to decomposition. Aldehydes or lactic, pyruvic or acetic acids may also be formed.

**INCOMPATIBLE MATERIALS:** Heat, flames, ignition sources and incompatibles.

## 11. TOXICOLOGICAL INFORMATION

**GENERAL COMMENTS:** Oral rat LD50: 20g/kg. Skin rabbit LD50: 20.8g/kg. Irritation: Eye rabbit/Draize, 500 mg/24H mild.

## 12. ECOLOGICAL INFORMATION

**CHEMICAL FATE INFORMATION:** When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

**EMPTY CONTAINER:** Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. TRANSPORT INFORMATION

**DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Not Regulated by DOT

## 15. REGULATORY INFORMATION

**UNITED STATES**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**FIRE:** No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes  
**CHRONIC:** No

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA REGULATORY:** The components of this blend are listed on the EPA TSCA Inventory of Chemical Substances.

**TSCA STATUS:** All ingredients in this mixture are in compliance with TSCA.

## 16. OTHER INFORMATION

**REASON FOR ISSUE:** Updated MSDS

**APPROVED BY:** F. James Corbett **TITLE:** Director of Quality & EH&S

**PREPARED BY:** F. James Corbett

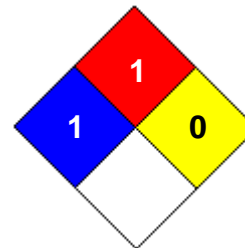
**INFORMATION CONTACT:** 800-422-2436 x 1136

**REVISION SUMMARY:** Revision #: 2. This MSDS replaces the December 04, 2008 MSDS., Any changes in information are as follows: In Section 1: Reason for Issue, MSDS Product CodeIn Section 10: Polymerization

#### HMIS RATING

|                      |                          |   |
|----------------------|--------------------------|---|
| HEALTH:              | <input type="checkbox"/> | 1 |
| FLAMMABILITY:        | <input type="checkbox"/> | 1 |
| PHYSICAL HAZARD:     | <input type="checkbox"/> | 0 |
| PERSONAL PROTECTION: | <input type="checkbox"/> | B |

#### NFPA CODES



**MANUFACTURER DISCLAIMER:** Interstate Chemical Company, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

**MATERIAL SAFETY DATA SHEET**

Customer's Use



Date Issued: 04/20/2007

MSDS No: ICC-02570

Date-Revised: 02/14/2011

Revision No: 3

**INTERCOOL BioGreen 30****1. PRODUCT AND COMPANY IDENTIFICATION****PRODUCT NAME:** INTERCOOL BioGreen 30**GENERAL USE:** Heat Transfer Fluid**PRODUCT FORMULATION NAME:** INTERCOOL BioGreen 30**ACTIVE INGREDIENT(S):** 1,3-Propanediol; Deionized Water; Corrosion Inhibitors and Buffers**MANUFACTURER**

Interstate Chemical Company, Inc.  
 Corporate Headquarters-Hermitage  
 2797 Freedland Road  
 Hermitage, PA 16148

**Emergency Contact:** F. James Corbett, Director of  
 Quality & EH&S

**E-Mail:** 724-981-3771**Product Stewardship:** 800-422-2436**Alternate Emergency Phone:** 724-981-3771**Transportation:** 800-422-2436**Service Number:** 800-422-2436**24 HR. EMERGENCY TELEPHONE NUMBERS**

800-ICC-CHEM

**COMMENTS:** Dispose of in accordance with all applicable local, state, and federal regulations. For assistance with your waste management/environmental service needs including waste disposal and recycling, please contact Interstate Chemical Environmental Services at 800-422-2436 ext. 1703 or email us at [environmentalservices@interstatechemical.com](mailto:environmentalservices@interstatechemical.com)

**2. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW****PHYSICAL APPEARANCE:** Irritant to skin. May cause redness and/or burning by contact with liquid.**IMMEDIATE CONCERNS:** Irritating to eyes, respiratory system and skin.**POTENTIAL HEALTH EFFECTS****EYES:** May cause irritation.**SKIN:** Minor skin irritation and penetration may occur.**INGESTION:** Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems**INHALATION:** Vapor inhalation is generally not a problem unless heated or misted.**3. COMPOSITION / INFORMATION ON INGREDIENTS**

| Chemical Name                    | Wt.% | CAS       | EINECS    |
|----------------------------------|------|-----------|-----------|
| 1,3-Propanediol                  | ~ 30 | 504-63-2  |           |
| Deionized Water                  | ~ 70 | 7732-18-5 | 231-791-2 |
| Corrosion Inhibitors and Buffers | < 10 | mixture   |           |
| Green Dye                        | < 1  |           |           |

#### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**SKIN:** Remove contaminated clothing. Wash with soap and water. Get medical attention.

**INGESTION:** Not expected to require first aid measures. Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

**OTHER CONSIDERATIONS:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Move exposed containers from fire area, if it can be done without risk. Use water to keep fire-exposed containers cool.

#### 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Absorb liquid and place in sealed container for disposal.

**LARGE SPILL:** Ventilate area of leak or spill. Remove all sources of ignition. Contain and recover liquid when possible. Do not flush to sewer.

##### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** When released into water, this material is expected to readily biodegrade.

**LAND SPILL:** When released into the soil, this material is expected to readily biodegrade.

**AIR SPILL:** When released into the air, this material is expected to have a half-life between 1 and 10 days.

**GENERAL PROCEDURES:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

#### 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Protect container from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

**HANDLING:** Store in adequate storage area at ambient temp.

**STORAGE:** Store in a cool dry place. Keep from freezing.

**SHELF LIFE:** Greater than one year when stored in its original container at the recommended storage temperature with the bungs closed.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

##### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses with side shields (or goggles) and a face shield.

**SKIN:** Wear suitable protective clothing and gloves.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**PROTECTIVE CLOTHING:** Wear protective gloves and clean body-covering clothing. Chemically resistant protective clothing and boots may be required.

**WORK HYGIENIC PRACTICES:** Establish good personal hygiene and work practices. Always wash hands and face

before eating, drinking or smoking. Provide safety shower and eye wash station in work area.

**OTHER USE PRECAUTIONS:** If the exposure limit is exceeded, a half-face respirator with an organic vapor cartridge and particulate filter (NIOSH type P95 or R95 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece respirator with an organic vapor cartridge and particulate filter (NIOSH P100 or R100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. Please note that N series filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid

**ODOR:** Odorless

**APPEARANCE:** Clear, green liquid

**COLOR:** Green

**pH:** 8.0 to 9.5

**PERCENT VOLATILE:** 70 at (68°F)

**Notes:** Volatile portion is water.

**VAPOR PRESSURE:** ~ 17 mmHg at (68°F)

**VAPOR DENSITY:** > 1 (Air=1)

**BOILING POINT:** ~ (216°F) Atmospheric pressure

**FREEZING POINT:** ~ (+9°F)

**SOLUBILITY IN WATER:** Completely Miscible

**EVAPORATION RATE:** < 1 (n-Butyl Acetate=1) Room Temperature

**DENSITY:** ~ 8.77 lbs/gal at (60°F)

**SPECIFIC GRAVITY:** ~ 1.052 (water=1) at 20°C

**COMMENTS:** The information in this section is calculated from specific known information about this product. This information should not be used as exact test results or specifications. The information is provided as typical properties for this product.

## 10. STABILITY AND REACTIVITY

**STABLE:** Yes

**HAZARDOUS POLYMERIZATION:** No

**STABILITY:** Stable under ordinary conditions of use and storage.

**POLYMERIZATION:** Product will not undergo polymerization.

**CONDITIONS TO AVOID:** Heat, flame, other sources of ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide and carbon monoxide may form when heated to decomposition. Aldehydes or lactic, pyruvic or acetic acids may also be formed.

**INCOMPATIBLE MATERIALS:** Strong Oxidizers

## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Not an eye irritant.

**SKIN EFFECTS:** Slight skin irritant.

**SENSITIZATION:** Not a skin sensitizer.

**GENERAL COMMENTS:** Oral rat LD50: 15g/kg. Skin rabbit LD50: 20g/kg. Inhalation 4 hour ALC: > 5.0mg/L in rats.

## 12. ECOLOGICAL INFORMATION

**CHEMICAL FATE INFORMATION:** When released into the soil, this material is expected to readily biodegrade. When

released into the soil, this material is expected to leach into groundwater. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

**EMPTY CONTAINER:** Dispose of container and unused contents in accordance with federal, state and local requirements.

### 14. TRANSPORT INFORMATION

**DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Not Regulated by DOT

### 15. REGULATORY INFORMATION

**UNITED STATES**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**FIRE:** No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** No

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA REGULATORY:** The components of this blend are listed on the EPA TSCA Inventory of Chemical Substances.

**TSCA STATUS:** All ingredients in this mixture are in compliance with TSCA.

### 16. OTHER INFORMATION

**REASON FOR ISSUE:** New MSDS

**APPROVED BY:** F. James Corbett **TITLE:** Director of Quality & EH&S

**PREPARED BY:** F. James Corbett

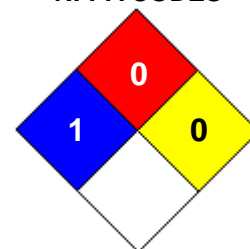
**INFORMATION CONTACT:** 800-422-2436 x 1136

**REVISION SUMMARY:** Revision #: 3. This MSDS replaces the November 28, 2007 MSDS., Any changes in information are as follows: In Section 1: Approved by, Title, Information Contact, MSDS Product Code In Section 15: TSCA Regulatory

#### HMIS RATING

|                             |                          |          |
|-----------------------------|--------------------------|----------|
| <b>HEALTH:</b>              | <input type="checkbox"/> | <b>1</b> |
| <b>FLAMMABILITY:</b>        | <input type="checkbox"/> | <b>0</b> |
| <b>PHYSICAL HAZARD:</b>     | <input type="checkbox"/> | <b>0</b> |
| <b>PERSONAL PROTECTION:</b> | <input type="checkbox"/> | <b>B</b> |

#### NFPA CODES



**MANUFACTURER DISCLAIMER:** Interstate Chemical Company, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

# MATERIAL SAFETY DATA SHEET

Customer's Use



Date Issued: 04/20/2007

MSDS No: ICC-02571

Date-Revised: 06/22/2011

Revision No: 2

## INTERCOOL BioGreen 40

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** INTERCOOL BioGreen 40

**GENERAL USE:** Heat Transfer Fluid

**PRODUCT FORMULATION NAME:** INTERCOOL BioGreen 40

**ACTIVE INGREDIENT(S):** 1,3-Propanediol; Deionized Water; Corrosion Inhibitors and Buffers

#### MANUFACTURER

Interstate Chemical Company, Inc.  
Corporate Headquarters-Hermitage  
2797 Freedland Road  
Hermitage, PA 16148

**Emergency Contact:** F. James Corbett,  
Director of Quality & EH&S

**E-Mail:** 724-981-3771

**Product Stewardship:** 800-422-2436

**Alternate Emergency Phone:** 724-981-3771

**Transportation:** 800-422-2436

**Service Number:** 800-422-2436

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

800-ICC-CHEM

**COMMENTS:** Dispose of in accordance with all applicable local, state, and federal regulations. For assistance with your waste management/environmental service needs including waste disposal and recycling, please contact Interstate Chemical Environmental Services at 800-422-2436 ext. 1703 or email us at [environmentalservices@interstatechemical.com](mailto:environmentalservices@interstatechemical.com)

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Irritant to skin. May cause redness and/or burning by contact with liquid.

**IMMEDIATE CONCERNS:** Irritating to eyes, respiratory system and skin.

#### POTENTIAL HEALTH EFFECTS

**EYES:** May cause irritation.

**SKIN:** Minor skin irritation and penetration may occur.

**INGESTION:** Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems

**INHALATION:** Vapor inhalation is generally not a problem unless heated or misted.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name                    | Wt. % | CAS       | EINECS    |
|----------------------------------|-------|-----------|-----------|
| 1,3-Propanediol                  | ~ 40  | 504-63-2  |           |
| Deionized Water                  | ~ 60  | 7732-18-5 | 231-791-2 |
| Corrosion Inhibitors and Buffers | < 10  | mixture   |           |
| Green Dye                        | < 1   |           |           |

### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**SKIN:** Remove contaminated clothing. Wash with soap and water. Get medical attention.

**INGESTION:** Not expected to require first aid measures. Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** None

**EXTINGUISHING MEDIA:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

**OTHER CONSIDERATIONS:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Move exposed containers from fire area, if it can be done without risk. Use water to keep fire-exposed containers cool.

### 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Absorb liquid and place in sealed container for disposal.

**LARGE SPILL:** Ventilate area of leak or spill. Remove all sources of ignition. Contain and recover liquid when possible. Do not flush to sewer.

#### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** When released into water, this material is expected to readily biodegrade.

**LAND SPILL:** When released into the soil, this material is expected to readily biodegrade.

**AIR SPILL:** When released into the air, this material is expected to have a half-life between 1 and 10 days.

**GENERAL PROCEDURES:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible.

Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Protect container from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

**HANDLING:** Store in adequate storage area at ambient temp.

**STORAGE:** Store in a cool dry place. Keep from freezing.

**SHELF LIFE:** Greater than one year when stored in its original container at the recommended storage temperature with the bungs closed.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses with side shields (or goggles) and a face shield.

**SKIN:** Wear suitable protective clothing and gloves.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**PROTECTIVE CLOTHING:** Wear protective gloves and clean body-covering clothing. Chemically resistant protective clothing and boots may be required.

**WORK HYGIENIC PRACTICES:** Establish good personal hygiene and work practices. Always wash hands and face before eating, drinking or smoking. Provide safety shower and eye wash station in work area.

**OTHER USE PRECAUTIONS:** If the exposure limit is exceeded, a half-face respirator with an organic vapor cartridge and particulate filter (NIOSH type P95 or R95 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece respirator with an organic vapor cartridge and particulate filter (NIOSH P100 or R100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. Please note that N series filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid

**ODOR:** Odorless

**APPEARANCE:** Clear, green liquid

**COLOR:** Green

**pH:** 8.0 to 9.5

**PERCENT VOLATILE:** 60 at (68°F)

**Notes:** Volatile portion is water.

**VAPOR PRESSURE:** ~ 17 mmHg at (60°F)

**VAPOR DENSITY:** > 1 (Air=1)

**BOILING POINT:** (218°F) Atmospheric pressure Boiling Point Chart

**FREEZING POINT:** (-6°F) Freezing Point Chart

**FLASHPOINT AND METHOD:** None

**SOLUBILITY IN WATER:** Completely Miscible

**EVAPORATION RATE:** < 1 (n-Butyl Acetate=1) Room Temperature

**DENSITY:** ~ 8.50 lbs/gal at (60°F)

**SPECIFIC GRAVITY:** ~ 1.020 (water=1) at 20°C

**VISCOSITY #1:** ~ 20 Centipoise at (68°F)

**COMMENTS:** The information in this section is calculated from specific known information about this product. This information should not be used as exact test results or specifications. The information is provided as typical properties for this product.

## 10. STABILITY AND REACTIVITY

**STABLE:** Yes

**HAZARDOUS POLYMERIZATION:** No

**STABILITY:** Stable under ordinary conditions of use and storage.

**POLYMERIZATION:** Product will not undergo polymerization.

**CONDITIONS TO AVOID:** Heat, flame, other sources of ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide and carbon monoxide may form when heated to decomposition. Aldehydes or lactic, pyruvic or acetic acids may also be formed.

**INCOMPATIBLE MATERIALS:** Strong Oxidizers

## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Not an eye irritant.

**SKIN EFFECTS:** Slight skin irritant.

**GENERAL COMMENTS:** Oral rat LD50: 15g/kg. Skin rabbit LD50: 20g/kg. Inhalation 4 hour ALC: > 5.0mg/L in rats.

## 12. ECOLOGICAL INFORMATION

**CHEMICAL FATE INFORMATION:** When released into the soil, this material is expected to

readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

**EMPTY CONTAINER:** Dispose of container and unused contents in accordance with federal, state and local requirements.

### 14. TRANSPORT INFORMATION

**DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Not Regulated by DOT

### 15. REGULATORY INFORMATION

**UNITED STATES**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**FIRE:** No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** No

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA REGULATORY:** This material is listed on the EPA TSCA Inventory of Chemical Substances

**TSCA STATUS:** All ingredients in this mixture are in compliance with TSCA.

### 16. OTHER INFORMATION

**REASON FOR ISSUE:** Updated MSDS

**APPROVED BY:** F. James Corbett **TITLE:** Director of Quality & EH&S

**PREPARED BY:** F. James Corbett

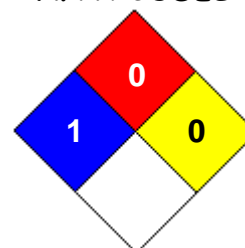
**INFORMATION CONTACT:** 800-422-2436 x 1136

**REVISION SUMMARY:** Revision #: 2. This MSDS replaces the November 28, 2007 MSDS. Any changes in information are as follows: In Section 1: Approved by, Title, Reason for Issue, Information Contact

#### HMIS RATING

|                             |                          |          |
|-----------------------------|--------------------------|----------|
| <b>HEALTH:</b>              | <input type="checkbox"/> | <b>1</b> |
| <b>FLAMMABILITY:</b>        | <input type="checkbox"/> | <b>0</b> |
| <b>PHYSICAL HAZARD:</b>     | <input type="checkbox"/> | <b>0</b> |
| <b>PERSONAL PROTECTION:</b> | <input type="checkbox"/> | <b>B</b> |

#### NFPA CODES





**MANUFACTURER DISCLAIMER:** Interstate Chemical Company, Inc. provides the information

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contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

# Material Safety Data Sheet

| WHMIS (Pictograms)  | WHMIS (Classification)               | Protective Clothing   |
|---|--------------------------------------|---|
|  | Not controlled under WHMIS (Canada). |  |

## Section 1. Chemical Product and Company Identification

|                          |  |                      |                                 |
|--------------------------|--|----------------------|---------------------------------|
| Product Name/ Trade name | <b>INTERCOOL BIOGREEN 50</b>   | Code                 | Not available.                  |
| Supplier                 | Interstate Chemical Company Inc.<br>2797 Freedland Road<br>Hermitage, PA 16148 | CAS #                | Mixture.                        |
| Synonym                  | Not available.   | DSL                  | CEPA DSL: INTERCOOL BIOGREEN 50 |
| Chemical Name            | Not applicable.  | CI#                  | Not available.                  |
| Chemical Family          | Not available.   | Validation Date      | 08/02/2011                      |
| Chemical Formula         | Not applicable.  | Print Date           | 08/02/2011                      |
| Manufacturer             | Interstate Chemical Company  | In Case of Emergency | 1-800-ICC-CHEM                  |
| Material Uses            | Not available.   |                      |                                 |

## Section 2. Composition and Information on Ingredients

| Name   | CAS #     | % by Weight           | Exposure Limits | LC <sub>50</sub> /LD <sub>50</sub> |
|--|-----------|-----------------------|-----------------|------------------------------------|
| 1) 1, 3 Propanediol<br>2) Water<br>3) Corrosion Inhibitors<br>4) Green Dye | 7732-18-5 | 50<br>50<br><10<br><1 | Not available.  | Not available.                     |

## Section 3. Hazards Identification

|                                  |   |
|----------------------------------|---|
| Potential Acute Health Effects   | Slightly hazardous in case of skin contact (irritant). Non-irritating to the eyes. Non-irritant for lungs.  |
| Potential Chronic Health Effects | <b>CARCINOGENIC EFFECTS:</b> Not available.<br><b>MUTAGENIC EFFECTS:</b> Not available.<br><b>TERATOGENIC EFFECTS:</b> Not available.<br><b>DEVELOPMENTAL TOXICITY:</b> Not available.<br>Repeated or prolonged exposure is not known to aggravate medical condition. |

## Section 4. First Aid Measures

|              |  |
|--------------|--|
| Eye Contact  | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention if irritation occurs.         |
| Skin Contact | Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.  |
| Inhalation   | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.  |
| Ingestion    | 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 if symptoms appear. |

Continued on Next Page

**Section 5. Fire Fighting Measures**

**Products of Combustion** Not available.

**Fire Fighting Media and Instructions** Not applicable.

**Special Remarks on Fire Hazards** Not available.

**Special Remarks on Explosion Hazards** Not available.  
Not applicable.  
Not applicable.

**Section 6. Accidental Release Measures**

**Small Spill and Leak** Absorb with an inert material and put the spilled material in an appropriate waste disposal.

**Large Spill and Leak** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**Personal Protection in Case of a Large Spill** Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Section 7. Handling and Storage**

**Precautions** Do not ingest. Do not breathe gas/fumes/ vapor/spray. If ingested, seek medical advice immediately and show the container or the label.

**Incompatibility** Not available.

**Storage** Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

**Engineering Controls** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

**Personal Protection**

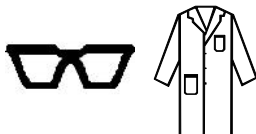
*Eyes* Safety glasses.

*Body* Lab coat.

*Respiratory* Not applicable.

*Hands* Not applicable.

*Feet* Not applicable.

**Protective Clothing (Pictograms)**

**Exposure Limits** Not available.

**Section 9. Physical and Chemical Properties**

|   |   |       |                |
|---|---|-------|----------------|
| Physical State and Appearance                       | Liquid.   | Odor  | Odorless.      |
| Molecular Weight                                    | Not applicable.   | Taste | Not available. |
| pH (1% Soln/Water)                                  | 8 [Basic.]  | Color | Clear Green.   |
| Boiling/Condensation Point                          | 105.5°C (221.9°F)   |       |                |
| Melting/Freezing Point                              | -32.7°C (-26.9°F)   |       |                |
| Critical Temperature                                | Not available.  |       |                |
| Instability Temperature                             | Not available.  |       |                |
| Specific Gravity                                    | 1.03 (Water = 1)  |       |                |
| Vapor Pressure                                      | 2.3 kPa (@ 20°C)  |       |                |
| Vapor Density                                       | >1 (Air = 1)  |       |                |
| Volatility  | Not available.  |       |                |
| Evaporation Rate                                    | Not available.  |       |                |
| Odor Threshold                                      | Not available.  |       |                |
| Viscosity   | Not available.  |       |                |
| LogK <sub>ow</sub>                                  | The product is equally soluble in oil and water.  |       |                |
| Ionicity (in Water)                                 | Amphoteric. (Water).  |       |                |
| Dispersion Properties                               | See solubility in water, acetone.   |       |                |
| Solubility  | Easily soluble in hot water, acetone.<br>Very slightly soluble in cold water, methanol, n-octanol.  |       |                |
| The Product is:                                     | Non-flammable.  |       |                |
| Auto-ignition Temperature                           | Not applicable.   |       |                |
| Flash Points  | Not applicable.   |       |                |
| Flammable Limits                                    | Not applicable.   |       |                |
| Fire Hazards in Presence of Various Substances      | Not applicable.   |       |                |
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of mechanical impact: Not available.<br>Risks of explosion of the product in presence of static discharge: Not available. |       |                |

**Section 10. Stability and Reactivity**

|   |                        |
|---|------------------------|
| Stability                               | The product is stable. |
| Conditions of Instability               | Not available.         |
| Incompatibility with Various Substances | Not available.         |
| Corrosivity                             | Not available.         |
| Hazardous Decomposition Products        | Not available.         |
| Special Remarks on Reactivity           | Not available.         |

**Continued on Next Page**

|                                |                |
|--------------------------------|----------------|
| Special Remarks on Corrosivity | Not available. |
|--------------------------------|----------------|

### Section 11. Toxicological Information

|                 |                |
|-----------------|----------------|
| Routes of Entry | Not available. |
|-----------------|----------------|

|                     |   |
|---------------------|---|
| Toxicity to Animals | Acute oral toxicity (LD50): 15000 mg/kg [Rat].<br>Acute dermal toxicity (LD50): 20000 mg/kg [Rabbit]. |
|---------------------|---|

#### Acute Effects on Humans

*Eyes* Non-irritating to the eyes.

*Skin* Sensitization of the product: Not available.  
Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

*Inhalation* Non-irritant for lungs.

*Ingestion* Not available.

|                           |   |
|---------------------------|---|
| Chronic Effects on Humans | <b>CARCINOGENIC EFFECTS:</b> Not available.<br><b>MUTAGENIC EFFECTS:</b> Not available.<br><b>TERATOGENIC EFFECTS:</b> Not available.<br><b>DEVELOPMENTAL TOXICITY:</b> Not available.<br>Repeated or prolonged exposure is not known to aggravate medical condition. |
|---------------------------|---|

|  |                |
|--|----------------|
| Special Remarks on Toxicity to Animals | Not available. |
|--|----------------|

|  |                |
|--|----------------|
| Special Remarks on Chronic Effects on Humans | Not available. |
|--|----------------|

|  |                |
|--|----------------|
| Special Remarks on Other Toxic Effects on Humans | Not available. |
|--|----------------|

### Section 12. Ecological Information

|             |                |
|-------------|----------------|
| Ecotoxicity | Not available. |
|-------------|----------------|

|              |                |
|--------------|----------------|
| BOD5 and COD | Not available. |
|--------------|----------------|

|                            |   |
|----------------------------|---|
| Products of Biodegradation | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |
|----------------------------|---|

|  |                |
|--|----------------|
| Toxicity of the Products of Biodegradation | Not available. |
|--|----------------|

|   |                |
|---|----------------|
| Special Remarks on the Products of Biodegradation | Not available. |
|---|----------------|

### Section 13. Disposal Considerations

|                   |  |
|-------------------|--|
| Waste Information | Waste must be disposed of in accordance with federal, state and local environmental control regulations. |
|-------------------|--|

|              |                |
|--------------|----------------|
| Waste Stream | Not available. |
|--------------|----------------|

**Section 14. Transport Information**

**TDG Classification** Not controlled under TDG (Canada).



**PIN** Not applicable.

**Maritime Transportation** Not available.

**Special Provisions for Transport** Not applicable.

**Section 15. Other Regulatory Information and Pictograms**

**WHMIS (Classification)** Not controlled under WHMIS (Canada).



**Regulatory Lists** CEPA DSL: INTERCOOL BIOGREEN 50

**Other Regulations** Not available. or of its ingredients

**Other Classifications**

**HCS (U.S.A.)** Not controlled under the HCS (United States).

**USA Regulatory Lists**

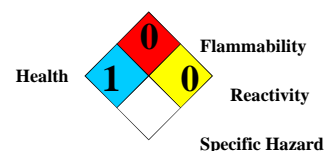
**DSCL (EEC)** This product is not classified according to the EU regulations.

**International Regulations Lists** No products were found.

**Hazardous Material Information System (U.S.A.)**

|                     |   |
|---------------------|---|
| Health              | 1 |
| Flammability        | 0 |
| Reactivity          | 0 |
| Personal Protection | a |

**National Fire Protection Association (U.S.A.)**



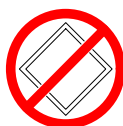
**DOT (U.S.A) (Pictograms)**



**DSCL (Europe) (Pictograms)**



**ADR (Europe) (Pictograms)**



**Section 16. Other Information**

References Not available.

Other Special Considerations Not available.

Validated by Regulatory affairs on 08/02/2011.

Verified by Regulatory affairs.

Printed 08/02/2011.

Information Contact Interstate Chemical Company Inc.  
2797 Freedland Road  
Hermitage, PA 16148**Notice to Reader**

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