

## SECTION 1: Product and Company Identification

### Identification of the substance or mixture

**Product Name:** SDS-PAGE Gel Fixing Solution  
**Catalog #:** 10500 and 10500-1

### Company Identification

Cepharm Life Sciences Inc.  
 11830 W Market Place, Suite K  
 Fulton, MD 20759  
 USA  
 Toll Free: 1-800-257-1565  
 Phone: 410-636-4954

**24-hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Toll Free: 1-800-424-9300/ +1 703-527-3887 CCN 1010970**

**For Research Use Only. Not for use in diagnostic procedures.**

## SECTION 2: Hazards identification

### Classification of the substance or mixture

FLAMMABLE LIQUID - Category 3

### GHS Label elements, including precautionary statements



Pictogram

**Signal word (GHS-US):** Danger

**Hazard statements (GHS-US):**

H226	Flammable liquid and vapor
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
H314	Causes severe skin burns and eye damage
H370	Causes damage to organs

**Precautionary statements (GHS-US):**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233	Keep container tightly closed
P240	Ground/Bond container and receiving equipment
P241	Use explosion-proof electrical/ventilating/lighting equipment
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash hands, forearms and face thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P310	If swallowed: Immediately call a poison center or doctor
P301+P330+P331	If swallowed: rinse mouth. Do NOT induce vomiting
P302+P352	If on skin: Wash with plenty of water
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do Continue rinsing
P307+P311	If exposed: Call a poison center/doctor

P310	Immediately call a poison center or doctor
P311	Call a poison center or doctor
P312	Call a poison center or doctor if you feel unwell
P321	Specific treatment (see supplemental first aid instruction on this label)
P322	Specific treatment (see supplemental first aid instruction on this label)
P330	Rinse mouth
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse
P370+P378	In case of fire: Use media other than water to extinguish
P403+P233	Store in a well-ventilated place. Keep container tightly closed
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up
P501	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

## SECTION 3: Composition / Information on Ingredients

### Hazardous components

Component	Classification	Concentration
Methanol, CAS No. 67-56-1	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370	50 %
Acetic acid, CAS No. 64-19-7	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314	10 %

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

## SECTION 4: First Aid Measures

### Description of first aid measures

#### Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### Skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms and effects, both acute and delayed

**Symptoms/effects after inhalation:** Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion.

**Symptoms/effects after skin contact:** Symptoms similar to those listed under ingestion. Slight irritation.

**Symptoms/effects after eye contact:** Redness of the eye tissue. Lacrimation.

**Symptoms/effects after ingestion:** Nausea. Vomiting. AFTER INGESTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the hemogram/blood composition. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Central nervous system depression. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.

**Chronic symptoms:**

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

See toxicological information (SECTION 11)

## SECTION 5: Firefighting Measures

**Extinguishing media****Suitable extinguishing media**

Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.

**Unsuitable extinguishing media**

Do not use water jet. Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

**Special hazards arising from the substance or mixture**

Fire hazard: DIRECT FIRE HAZARD: Highly flammable liquid and vapor. Gas/vapor flammable with air within explosion limits.

INDIRECT FIRE HAZARD: May be ignited by sparks.

Explosion hazard: DIRECT EXPLOSION HAZARD: Gas/vapor explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

Reactivity: Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds.

**Firefighting instructions:**

Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Protective equipment: Gas-tight suit. Emergency procedures: Keep upwind. Mark the danger area. Consider evacuation. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. **Keep containers closed. Wash contaminated clothes.**

**For emergency responders**

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

**Environmental precautions**

Prevent soil and water pollution. Prevent spreading in sewers.

**Methods and materials for containment and cleaning up**

**For containment:** Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute combustible/toxic gases/vapors with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

**Methods for cleaning up:** Take up liquid spill into a non-combustible material e.g.: sand, earth, vermiculite slaked lime or soda ash. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

**Other information:** Dispose of materials or solid residues at an authorized site.

## SECTION 7: Handling & Storage

**Precautions for safe handling:**

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over.

**Hygiene measures:**

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**Conditions for safe storage, including any incompatibilities Technical measures:** Ground/bond container and receiving equipment.

**Storage conditions:** Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

## SECTION 8: Exposure Controls / Personal Protection

### Control Parameters:

#### Occupational exposure limits

<b>Methanol, CAS No. 67-56-1</b>	ACGIH	ACGIH TWA (ppm)	200 ppm
	ACGIH	ACGIH STEL (ppm)	250 ppm
<b>Acetic acid, CAS No. 64-19-7</b>	ACGIH	ACGIH TWA (ppm)	10 ppm
	ACGIH	ACGIH STEL (ppm)	15 ppm

#### Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, 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.

#### 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.

#### Individual protection measures

##### 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.

##### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin Protection

##### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

##### Body Protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

##### Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

##### Respiratory protection

Use a properly fitted, particulate filter 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.

## SECTION 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

a) Appearance	Form: Liquid Color: Clear
b) Odor	Mild Odor
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Not Applicable
f) Initial boiling point and boiling range	No data available
g) Flash point	27°C
h) Evaporation rate	No data available
i) Flammability (solid, gas)	Not Applicable
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available

l) Relative Vapor density	No data available
m) Relative density	No data available
n) Solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosion limits	No data available
t) Explosive properties	No data available
u) Oxidizing properties	No data available

**Other safety information**

No data available

## SECTION 10: Stability & Reactivity

**Reactivity:**

Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds.

**Chemical Stability:**

Stable under normal conditions.

**Possibility of hazardous reactions:**

No dangerous reactions known under normal conditions of use.

**Conditions to avoid:**

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

**Incompatible materials:**

No additional information available

**Hazardous decomposition products:**

Hazardous decomposition products

## SECTION 11: Toxicological Information

<b>Acute toxicity (oral)</b>	: Oral: Toxic if swallowed
<b>Acute toxicity (dermal)</b>	: Dermal: Toxic in contact with skin
<b>Acute toxicity (inhalation)</b>	: Inhalation vapor: Toxic if inhaled

<b>ATE US (oral)</b>	198.799 mg/kg body weight
<b>ATE US (dermal)</b>	600 mg/kg body weight
<b>ATE US (vapors)</b>	5.7 mg/l/4h

<b>Methanol (67-56-1)</b>	
<b>LD50 oral rat</b>	1187 - 2769 mg/kg body weight (BASF test, Rat, Male/female, Weight of evidence)
<b>LD50 dermal rabbit</b>	17100 mg/kg (Rabbit, Inconclusive, insufficient data)
<b>LC50 inhalation rat (mg/l)</b>	128.2 mg/l air (BASF test, 4 h, Rat, Male/female, Weight of evidence)
<b>ATE US (oral)</b>	100 mg/kg body weight
<b>ATE US (dermal)</b>	300 mg/kg body weight
<b>ATE US (gases)</b>	700 ppmV/4h
<b>ATE US (vapors)</b>	3 mg/l/4h
<b>ATE US (dust, mist)</b>	0.5 mg/l/4h

<b>Specific target organ toxicity – single exposure:</b>	Causes damage to organs.
<b>Specific target organ toxicity – repeated exposure:</b>	Not classified
<b>Aspiration hazard:</b>	Not classified
<b>Viscosity:</b>	No data available
<b>Symptoms/effects after inhalation:</b>	Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion.
<b>Symptoms/effects after skin contact:</b>	Symptoms similar to those listed under ingestion. Slight irritation.
<b>Symptoms/effects after eye contact:</b>	Redness of the eye tissue. Lacrimation.
<b>Symptoms/effects after ingestion:</b>	Nausea. Vomiting. AFTER INGESTION OF HIGH QUANTITIES: FOLLOWING
<b>SYMPTOMS MAY APPEAR LATER:</b>	Change in the hemogram/blood composition. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Central nervous system depression. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.
<b>Chronic symptoms:</b>	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

**Acetic acid (64-19-7)**

<b>LD50 oral rat</b>	3310 mg/kg body weight (Rat, Male/female, Experimental value)
<b>LC50 inhalation rat (mg/l)</b>	11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value)
<b>ATE US (oral)</b>	3310 mg/kg body weight
<b>ATE US (vapors)</b>	11.4 mg/l/4h
<b>ATE US (dust, mist)</b>	11.4 mg/l/4h

<b>Skin corrosion/irritation:</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/irritation:</b>	Eye damage, category 1, implicit
<b>Respiratory or skin sensitization:</b>	Not classified
<b>Germ cell mutagenicity:</b>	Not classified
<b>Carcinogenicity:</b>	Not classified
<b>Reproductive toxicity:</b>	Not classified
<b>Specific target organ toxicity – single exposure:</b>	Causes damage to organs.

<b>SECTION 12: Ecological Information</b>
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**Ecology - general** : Before neutralization, the product may represent a danger to aquatic organisms.

**Methanol (67-56-1)**

LC50 fish 1	15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semistatic system, Fresh water, Experimental value)
ErC50 (algae)	22000 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

**Acetic acid (64-19-7)**

LC50 fish 1	> 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilization Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

**Persistence and degradability****Methanol (67-56-1)**

Persistence and degradability Biodegradable in the soil. Readily biodegradable in water.

Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance

**Acetic acid (64-19-7)**

Persistence and degradability Readily biodegradable in the soil. Readily biodegradable in water.

Biochemical oxygen demand (BOD)	0.6 - 0.74 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.03 g O <sub>2</sub> /g substance
ThOD	1.07 g O <sub>2</sub> /g substance

**Bioaccumulative potential****Methanol (67-56-1)**

BCF fish 1	1 - 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Log Pow	-0.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

**Acetic acid (64-19-7)**

BCF fish 1	3.16 (Pisces, Fresh water, QSAR)
Log Pow	-0.17 (Experimental value, 25 °C)
Bioaccumulative potential	Not bioaccumulative

**Mobility in soil****Methanol (67-56-1)**

Surface tension	0.023 N/m (20 °C)
Log Koc	-0.89 - -0.21 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

**Acetic acid (64-19-7)**

Surface tension	26.3 mN/m (30 °C)
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

**Other adverse effects:** No additional information available

## SECTION 13: Disposal Considerations

### Disposal methods

The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport Information

### DOT (US)

UN Number:	UN1230
Proper Shipping Name:	Methanol
Class:	3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group:	II - Medium Danger
Hazard labels:	3 - Flammable liquid

### IATA

UN Number:	1230
Class:	3 - Flammable Liquids

## SECTION 15: Regulatory Information

### US Federal Regulations

#### Methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313  
CERCLA RQ 5000 lb

#### Acetic acid (64-19-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313  
CERCLA RQ 5000 lb

### International regulations

#### CANADA

#### Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

#### Acetic acid (64-19-7)

Listed on the Canadian DSL (Domestic Substances List)

### US State regulations

#### Methanol (67-56-1)

U.S. - California - Proposition 65 - Carcinogens List - No  
U.S. - California - Proposition 65 - Developmental Toxicity - Yes  
U.S. - California - Proposition 65 - Reproductive Toxicity - Female - No  
U.S. - California - Proposition 65 - Reproductive Toxicity - Male

## SECTION 16: Other Information

### HMIS Rating

Health hazard:	0
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

### NFPA Rating

Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

**Disclaimer:** This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not represent any guarantee of the properties of the product. Cepham Life Sciences Incorporated and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.