



MATERIAL SAFETY DATA SHEET

Revision Date: 09/28/2009

MSDSANSI/ANSI/EN/150000100356/Version 1.3

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	FutureSol PSA65
Product Identification Number(s)	70051, E700510S, E700510S, P7005102, P7005103, P7005100, P700510S
Manufacturer/Supplier	FutureFuel Chemical Company Gap Road 2800 Batesville, AR 72503 US
MSDS Prepared by	Product Safety and Health
Chemical Name	p-Phenol Sulfonic Acid
Synonym(s)	70051
Molecular Formula	not applicable
Molecular Weight	not applicable
Product Use	chemical intermediate
OSHA Status	hazardous

For product information telephone FutureFuel Chemical Company 870-698-3000, 8:00 am - 4:00 pm, Central.

Emergency telephone CHEMTREC: US 800-424-9300, international 703-527-3887

2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided, if available.)

Weight %	Component	CAS Registry No.
60 - 70%	para-Phenol Sulfonic Acid	98-67-9
25 - 40%	water	7732-18-5
<5%	other impurities	not applicable
<3%	sulfuric acid	7664-93-9
<0.2%	phenol	108-95-2

3. HAZARDS IDENTIFICATION

DANGER!
 CAUSES SEVERE SKIN AND EYE BURNS
 CAUSES DIGESTIVE TRACT BURNS
 MIST OR VAPOR EXTREMELY IRRITATING TO EYES AND RESPIRATORY TRACT
 COMBUSTIBLE LIQUID AND VAPOR

HMIS® Hazard Ratings: Health - 3*, Flammability -2, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

4. FIRST-AID MEASURES

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Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.

5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, carbon dioxide, dry chemical, alcohol foam

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool.

Hazardous Combustion Products: carbon dioxide, carbon monoxide, oxides of sulfur

Unusual Fire and Explosion Hazards: Combustible.

6. ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment. Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

For Large Spills: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Do not breathe mist or vapor. Do not get in eyes, on skin, on clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat and flame. Keep from contact with oxidizing materials.

Storage: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Country specific exposure limits have not been established or are not applicable unless listed below.

SULFURIC ACID, THORACIC FRACTION, Thoracic fraction.

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 0.2 mg/m³

SULFURIC ACID

US. NIOSH: Pocket Guide to Chemical Hazards

Recommended exposure limit (REL): 1 mg/m³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 1 mg/m³

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 1 mg/m³

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US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants
Short Term Exposure Limit (STEL): 3 mg/m³

PHENOL

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 ppm,
US. ACGIH Threshold Limit Values
Skin designation: Can be absorbed through the skin.
US. NIOSH: Pocket Guide to Chemical Hazards
Recommended exposure limit (REL): 5 ppm, 19 mg/m³
US. NIOSH: Pocket Guide to Chemical Hazards
Ceiling Limit Value and Time Period (if specified): 15.6 ppm, 60 mg/m³ 15-min
US. NIOSH: Pocket Guide to Chemical Hazards
Skin designation: Can be absorbed through the skin.
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 ppm, 19 mg/m³
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Skin designation: Can be absorbed through the skin.
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants
Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 5 ppm, 19 mg/m³
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants
Skin designation: Can be absorbed through the skin.

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Recommended Decontamination Facilities: eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: liquid

Color: amber

Odor: phenolic

Specific Gravity: 1.3184 (25 °C)

Boiling Point: > 100 °C 1,013.25 hPa

Solubility in Water: complete

Flash Point: >62.8 °C (closed cup)

Thermal Decomposition Temperature: (HPDSC) No exotherm

10. STABILITY AND REACTIVITY

Stability: Stable.

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Incompatibility: Material reacts with strong oxidizing agents.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

12. ECOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

This material has not been tested for environmental effects.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

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DOT (USA)

Reportable Quantity: 454 kg (sulfuric acid)

Possible Shipping Description(s):

Phenolsulfonic acid, liquid, solution
8 UN 1803 II

Sea - IMDG (International Maritime Dangerous Goods)

Possible Shipping Description(s):

PHENOLSULPHONIC ACID, LIQUID, SOLUTION
8 UN 1803 II

Air - ICAO (International Civil Aviation Organization)

Possible Shipping Description(s):

Phenolsulphonic acid, liquid, solution
8 UN 1803 II

15. REGULATORY INFORMATION

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

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/3, D/2/A, E

SARA 311-312 Hazard Classification(s):

immediate (acute) health hazard
delayed (chronic) health hazard
fire hazard

SARA 313: none, unless listed below

SULFURIC ACID

Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below

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TSCA (US Toxic Substances Control Act): All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All components of this product are listed on the DSL. Any impurities present in this product are exempt from listing.

EINECS (European Inventory of Existing Commercial Chemical Substances): All components of this product are listed on EINECS. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): All components of this product are listed on AICS or otherwise comply with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): All components of this product are listed in the Handbook or have been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): One or more components of this product are not listed on the Korean inventory. In Korea, its use is restricted to research and development purposes only.

Philippines Inventory (PICCS) : All components of this product are listed on the Philippine inventory or otherwise comply with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

16. OTHER INFORMATION

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

Highlighted areas indicate new or changed information.