

SAFETY DATA SHEET



Conforms to regulation (EC) no. EU 453/2010

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Denhardt's Solution (50X)

Product Number: EC-915

1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer

National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

1.4 Emergency Telephone Number

ChemTel Inc.

Contract number MIS8894340
1-800 255-3924 (United States, Canada, Puerto Rico & US Virgin Islands)
01-800-099-0731 (Mexico)
400-120-0751 (China)
000-800-100-4086 (India)
1-300-954-583 (Australia)
0-800-591-6042 (Brazil)
+1-813-255-3924 (All other regions)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Not a hazardous substance or mixture according to regulation (EC) No. 1272/2008.

2.2 Label Elements

This product has no labeling elements associated with EC directives or respective national laws.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Names/Description

Aqueous solution of acrylamides and urea.

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Polyvinylpyrrolidone	1	9003-39-8		N.A.
Bovine Serum Albumin	1	9048-46-8	232-936-2	N.A.
Ficol 400	1	26873-85-8		N.A.

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation

Polyvinylpyrrolidone:
No information found.

Bovine Serum Albumin:
No information found.

Ficol 400:
No information found.

Ingestion

Polyvinylpyrrolidone:
No information found.

Bovine Serum Albumin:
No information found.

Ficol 400:
No information found.

Skin

Polyvinylpyrrolidone:
No information found.

Bovine Serum Albumin:
No information found.

Ficol 400:
No information found.

Eyes

Polyvinylpyrrolidone:
No information found.

Bovine Serum Albumin:
No information found.

Ficol 400:
No information found.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use media appropriate to the primary cause of fire.

5.2 Special Hazards Arising from the Substance/Mixture

Hazardous Combustion Products

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

Hazardous Decomposition Products

Upon heating, may produce ammonia, nitrogen oxides, cyanuric acid, cyanic acid, biuret, carbon dioxide, carbon monoxide, and hydrogen.

Hazardous Polymerization

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

5.3 Advice for Firefighters

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.

5.4 Further Information

No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

If water solvent has evaporated, wear NIOSH approved air-purifying respirator.

6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

6.4 References to Other Sections

For disposal information, see Section 13. For protective clothing and equipment, see Section 8.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Wear special protective equipment (Sec. 8) where exposures may exceed established levels.

7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area. Protect from physical damage. Isolate from incompatible materials (section 10).

Incompatibles

Polyvinylpyrrolidone:

No information found.

Bovine Serum Albumin:

No information found.

Ficol 400:

No information found.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

Component: Polyvinylpyrrolidone

ACGIH Threshold Limit Value (TLV): N.A.

OSHA Permissible Exposure Limit (PEL): N.A.

Component: Bovine Serum Albumin

ACGIH Threshold Limit Value (TLV): None established

OSHA Permissible Exposure Limit (PEL): None established

Component: Ficol 400

ACGIH Threshold Limit Value (TLV): N.A.

OSHA Permissible Exposure Limit (PEL): N.A.

8.2 Exposure Controls

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.

Respiratory Protection

If exposure limits are exceeded, wear a full-face respirator with organic vapor cartridge and high efficiency dust mist filter. Beyond fifty times exposure limits or when exposure levels are not known, wear a full-face piece positive pressure respirator.

Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Clear, colorless solution	b. Odor	None
c. Odor Threshold	N.A.	d. pH	Neutral
e. Melting/Freezing Point (°C)	0	f. Boiling point (°C)	104.4
g. Flash Point (°C)	N.A.	h. Evaporation Rate	1.0
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	Water	l. Vapor Density (Air = 1)	N.A.
m. Relative Density	1.15	n. Water Solubility	Soluble

o. Partition Coefficient n-octanol/water	Mixture	p. Autoignition Temperature (°C)	N.A.
q. Decomposition Temperature (°C)	N.A.	r. Viscosity	No data available.
s. Explosive Properties	N.A.	t. Oxidizing Properties	Not an oxidizer

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive under recommended conditions of use.

10.2 Chemical Stability

Stable under ordinary conditions of use, and when stored at -20°C.

10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

10.4 Conditions to Avoid

Heat, shock, UV light, and incompatibles.

10.5 Incompatible Materials

Polyvinylpyrrolidone:
No information found.

Bovine Serum Albumin:
No information found.

Ficol 400:
No information found.

10.6 Hazardous Decomposition Products

Upon heating, may produce ammonia, nitrogen oxides, cyanuric acid, cyanic acid, biuret, carbon dioxide, carbon monoxide, and hydrogen.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD50 Values

Oral Rat LD50 (mg/kg)

5880

Dermal Rabbit LD50 (mg/kg)

5040

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Polyvinylpyrrolidone	No data	No data	No data
Bovine Serum Albumin	No data	No data	N.A.
Ficol 400	No data	No data	N.A.

Potential Health Effects

Inhalation

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Ingestion

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Skin

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Eyes

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Carcinogenicity

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Mutagenicity

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Reproductive Toxicity

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Teratogenic Effects

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Routes of Entry

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400
No information found.

Target Organ Statement

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No information found.

Ficol 400

No information found.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

COMPONENT: Polyvinylpyrrolidone

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

COMPONENT: Bovine Serum Albumin

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

COMPONENT: Ficol 400

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

12.2 Persistence and Degradability

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No data

Ficol 400
No information available.

12.3 Bioaccumulative Potential

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No data

Ficol 400
No information available.

12.4 Mobility in Soil

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No data

Ficol 400
No information available.

12.5 Results of PBT and vPvB Assessment

Polyvinylpyrrolidone
No information found.

Bovine Serum Albumin
No data

Ficol 400
No information available.

12.6 Other Adverse Effects

Polyvinylpyrrolidone

No information found.

Bovine Serum Albumin
None

Ficol 400
No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	Not regulated	Not regulated	Not regulated	Not regulated
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Polyvinylpyrrolidone	No	No	No	No	No
Bovine Serum Albumin	No	No	No	No	No
Ficol 400	No	No	No	No	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16 - OTHER INFORMATION

Revisional Updates

4/26/2019 - Updated Section 1.4

5/29/2015 - Updated Sections 2.1 and 3.2

1/17/2014 - Released Version 1.0

NFPA Codes

Health 0 Flammability 0 Reactivity 0

Dangers

Polyvinylpyrrolidone
None

Bovine Serum Albumin
None

Ficol 400
None

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.