



Minntech Corporation
14605 28th Avenue North
Minneapolis, Minnesota 55447-4822 USA
Telephone (763) 553-3300
Fax (763) 553-3387

Dear Customer:

Thank you for interest in the Hemodialysis Acetate Concentrate Renapak Product. Enclosed you will find the following MSDS(s):

- Hemodialysis Acetate Concentrate Renapak Powder Component
- Hemodialysis Acetate Concentrate Renapak Sodium Acetate Component
- Hemodialysis Acetate Concentrate Renapak (Final Product for Renapak)

For the general safety of your employees we feel it is our responsibility to provide to you an individual MSDS for each component of the Renapak and an MSDS of what your final product will become. To insure that you have all the pages, the Powder Component is pages 2-4, the Sodium Acetate Component is pages 5-7, and the Final Product is pages 8-10. Also, at the bottom of each sheet there is MSDS part number (50095-031) that identifies both the raw materials used to make this product, and what you will have made as a final product.

We appreciate your business and look forward to serving you in the future.

Sincerely,

The Risk Manager

Section 1. Product and Company Identification

Identification:

Product Name: Hemodialysis Acetate Concentrate Renapak Powder Component
RP Series – Renapak Acetate Concentrate

Company Identification: Minntech Corp
14605 28th Avenue North
Minneapolis, MN 55447
1-800- 328-3340
(763) 553-3300

Emergency Telephone Number: CHEMTREC 1-800-424-9300, or (703) 527-3887

Section 2. Composition/Information on Ingredients

Component	CAS #	Amount (percentage by Weight)	PEL
Sodium Chloride	7647-14-5		PNOC
Dextrose	50-99-7		PNOC
Calcium Chloride	10043-52-4		PNOC
Potassium Chloride	7447-40-7		PNOC
Magnesium Chloride	7786-30-3		PNOC

The amount (percentage by weight) is specific to the product
PNOC (Particulate Not Otherwise Classified): Respirable Fraction 5mg/m³ and Total Dust 15 mg/m³.

Section 3. Hazards Identification

Appearance: White
Physical State: Powder
Odor: None
Hazards of Product: Non-hazardous

Potential Health Effects

Inhalation: Non-hazardous
Ingestion: Non-hazardous
Skin Contact: Non-irritating
Eye Contact: Can cause irritation to the eyes.

Section 4. First Aid Measures

Eyes and Skin: If irritation should occur to broken or abraded skin, wash with copious amounts of water.

Ingestion: Non-hazardous

Inhalation: Non-hazardous

Section 5. Fire Fighting Measures

Flash Point: N/A
Flammable Limits: N/A
Extinguishing Media: N/A
Unusual Fire and Explosion Hazards: Does not support combustion

Section 6. Accidental Release Measures

If spilled in a dry or powder form, sweep up and do not reuse. If there is a spill in a liquid state, put on the appropriate Personal Protective Equipment and contain the spill. Do not try to reuse the product. Dispose of this product in accordance with all applicable, Federal, State and Local regulations.

Section 7. Handling and Storage

General Handling: Keep container closed when not in use. Store in a dry area between 40-90F. Store unused product in original closed container. Once the product has been removed, do not return to the original container.

Ventilation: Local Exhaust

Section 8. Exposure Controls/Personal Protection

Eyewear: Not required but recommended to be worn.

Gloves: Not required but recommended to be worn.

Clothing: Not required.

Respirator: Not required.

Section 9. Physical and Chemical Properties

Physical State: Powder (Liquid when mixed with other components in Renapak)
Appearance: White (Clear when mixed with other components in Renapak)
pH (as a concentrate): NA
Solubility in Water (By Weight): NA (Complete when mixed with the other components in Renapak)
Odor: None
Molecular Weight: ND
Boiling Point (760 mmHg): ND
Freezing Point: ND
Specific Gravity (H₂O = 1): ND
Vapor Pressure at 20 C: ND
Vapor Density (air = 1): ND
Evaporation Rate (Butyl Acetate = 1): ND
Melting Point: ND

Section 10. Stability and Reactivity

Conditions to Avoid: None Known
Incompatible Materials: None known
Hazardous Polymerization: Will not occur.
Hazardous Decomposition: Will not occur.

Section 11. Toxicological Information

Cancer Related Information:

Ingredient	CAS Numbers	NTP	IARC	OSHA
Sodium Chloride	7647-14-5	Known: NO Anticipated: NO	None	NO
Dextrose	50-99-7	Known: NO Anticipated: NO	None	NO
Calcium Chloride	10043-52-4	Known: NO Anticipated: NO	None	NO
Potassium Chloride	7447-40-7	Known: NO Anticipated: NO	None	NO
Magnesium Chloride	7786-30-3	Known: NO Anticipated: NO	None	NO

Section 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found

Section 13. Disposal Considerations

Dispose of this product in accordance with all applicable, Federal, State and Local regulations.

Section 14. Transport Information

This product is not defined as a hazardous material in accordance with the Department of Transportation.

Section 15. Regulatory Information

International Inventory Status:

Ingredient	CAS Numbers	EC	Japan	Australia	Korea	Canada: DSL	Canada: NDSL
Sodium Chloride	7647-14-5	YES	YES	YES	YES	YES	NO
Dextrose	50-99-7	YES	YES	YES	YES	YES	NO
Calcium Chloride	10043-52-4	YES	YES	YES	YES	YES	NO
Potassium Chloride	7447-40-7	YES	YES	YES	YES	YES	NO
Magnesium Chloride	7786-30-3	YES	YES	YES	YES	YES	NO

United States:

Ingredient	CAS Numbers	OSHA	CAA	CWA	RCRA	SARA 302	SARA 313	TSCA
Sodium Chloride	7647-14-5	NO	NO	NO	NO	NO	NO	NO
Dextrose	50-99-7	NO	NO	NO	NO	NO	NO	NO
Calcium Chloride	10043-52-4	NO	NO	NO	NO	NO	NO	NO
Potassium Chloride	7447-40-7	NO	NO	NO	NO	NO	NO	NO
Magnesium Chloride	7786-30-3	NO	NO	NO	NO	NO	NO	NO

CA Proposition 65: This product is not affected by CA Proposition 65.

WHMIS (Canada): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Section 16. Other Information

NFPA Ratings:

Flammability: 0
Health: 0
Reactivity: 0
Specific Hazard:

HMIS Ratings:

Flammability: 0
Health: 0
Reactivity: 0
PPE: B

Origination Date: 7/15/03
Revision Date: 07-14-06
Prepared by: Risk Manager

Section 1. Product and Company Identification

Identification:

Product Name: Hemodialysis Acetate Concentrate Renapak Sodium Acetate Component
RP Series – Renapak Acetate Concentrate

Company Identification: Minntech Corp
14605 28th Avenue North
Minneapolis, MN 55447
1-800- 328-3340
(763) 553-3300

Emergency Telephone Number: CHEMTREC 1-800-424-9300, or (703) 527-3887

Section 2. Composition/Information on Ingredients

Component	CAS #	Amount (percentage by Weight)	PEL
Sodium Acetate	127-09-3	100	PNOC

PNOC (Particulate Not Otherwise Classified): Respirable Fraction 5mg/m³ and Total Dust 15 mg/m³.

Section 3. Hazards Identification

Appearance: White
Physical State: Powder
Odor: None
Hazards of Product: Non-hazardous

Potential Health Effects

Inhalation: Non-hazardous
Ingestion: Non-hazardous
Skin Contact: Non-irritating
Eye Contact: Can cause irritation to the eyes.

Section 4. First Aid Measures

Eyes and Skin: If irritation should occur to broken or abraded skin, wash with copious amounts of water.

Ingestion: Non-hazardous

Inhalation: Non-hazardous

Section 5. Fire Fighting Measures

Flash Point: N/A
Flammable Limits: N/A
Extinguishing Media: N/A
Unusual Fire and Explosion Hazards: Does not support combustion

Section 6. Accidental Release Measures

If spilled in a dry or powder form, sweep up and do not reuse. If there is a spill in a liquid state, put on the appropriate Personal Protective Equipment and contain the spill. Do not try to reuse the product. Dispose of this product in accordance with all applicable, Federal, State and Local regulations.

Section 7. Handling and Storage

General Handling: Keep container closed when not in use. Store in a dry area between 40-90F. Store unused product in original closed container. Once the product has been removed, do not return to the original container.

Ventilation: Local Exhaust

Section 8. Exposure Controls/Personal Protection

Eyewear: Not required but recommended to be worn.
Gloves: Not required but recommended to be worn.
Clothing: Not required.
Respirator: Not required.

Section 9. Physical and Chemical Properties

Physical State: Powder (Liquid when mixed with other components in Renapak)
Appearance: White (Clear when mixed with other components in Renapak)
pH (as a concentrate): NA
Solubility in Water (By Weight): NA (Complete when mixed with the other components in Renapak)
Odor: None
Molecular Weight: ND
Boiling Point (760 mmHg): ND
Freezing Point: ND
Specific Gravity (H₂O = 1): 1.53
Vapor Pressure at 20 C: ND
Vapor Density (air = 1): ND
Evaporation Rate (Butyl Acetate = 1): ND
Melting Point: 324 C

Section 10. Stability and Reactivity

Conditions to Avoid: None Known
Incompatible Materials: None known
Hazardous Polymerization: Will not occur.
Hazardous Decomposition: Will not occur.

Section 11. Toxicological Information

This component used in this product is not believed to be toxic to humans.

Cancer Related Information:

Ingredient	CAS Numbers	NTP	IARC	OSHA
Sodium Acetate	127-09-3	Known: NO Anticipated: NO	None	NO

Section 12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found

Section 13. Disposal Considerations

Dispose of this product in accordance with all applicable, Federal, State and Local regulations.

Section 14. Transport Information

This product is not defined as a hazardous material in accordance with the Department of Transportation.

Section 15. Regulatory Information

International Inventory Status:

Ingredient	CAS Numbers	EC	Japan	Australia	Korea	Canada: DSL	Canada: NDSL
Sodium Acetate	127-09-3	YES	YES	YES	YES	YES	NO

United States:

Ingredient	CAS Numbers	OSHA	CAA	CWA	RCRA	SARA 302	SARA 313	TSCA
Sodium Acetate	127-09-3	NO	NO	NO	NO	NO	NO	NO

CA Proposition 65: This product is not affected by CA Proposition 65.

WHMIS (Canada): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Section 16. Other Information

NFPA Ratings:

Flammability: 0
Health: 1
Reactivity: 0
Specific Hazard:

HMIS Ratings:

Flammability: 0
Health: 1
Reactivity: 0
PPE: B

Origination Date: 7/15/03
Revision Date: 07-14-06
Prepared by: Risk Manager

Section 1. Product and Company Identification

Identification:

Product Name: Hemodialysis Acetate Concentrate (Final Product for Renapak)
RP Series – Renapak Acetate Concentrate

Company Identification: Minntech Corp
14605 28th Avenue North
Minneapolis, MN 55447
1-800- 328-3340
(763) 553-3300

Emergency Telephone Number: CHEMTREC 1-800-424-9300, or (703) 527-3887

Section 2. Composition/Information on Ingredients

Component	CAS #	Amount (percentage by Weight)	PEL
Sodium Chloride	7647-14-5		NE
Dextrose	50-99-7		NE
Calcium Chloride	10043-52-4		NE
Potassium Chloride	7447-40-7		NE
Magnesium Chloride	7786-30-3		NE
Sodium Acetate	127-09-3		NE
Water	7732-18-5		NE

The amount (percentage by weight) is specific to the product
NE: None Established

Section 3. Hazards Identification

Appearance: Clear
Physical State: Liquid
Odor: None
Hazards of Product: Non-hazardous

Potential Health Effects

Inhalation: Non-hazardous
Ingestion: Non-hazardous
Skin Contact: Non-irritating
Eye Contact: Can cause irritation to the eyes.

Section 4. First Aid Measures

Eyes and Skin: If irritation should occur to broken or abraded skin, wash with copious amounts of water.
Ingestion: Non-hazardous
Inhalation: Non-hazardous

Section 5. Fire Fighting Measures

Flash Point: N/A
Flammable Limits: N/A
Extinguishing Media: N/A
Unusual Fire and Explosion Hazards: Does not support combustion

Section 6. Accidental Release Measures

Contain the spill. If allowed by federal, state or local regulatory authority, flush spill to the sewer. Do not reuse the liquid material.

Section 7. Handling and Storage

General Handling: Keep container closed when not in use. Store in a dry area between 40-90F. Store unused product in original closed container. Once the product has been removed, do not return to the original container.

Ventilation: Local Exhaust

Section 8. Exposure Controls/Personal Protection

Eyewear: Not required but recommended to be worn.

Gloves: Not required but recommended to be worn.

Clothing: Not required.

Respirator: Not required.

Section 9. Physical and Chemical Properties

Physical State: Liquid
Appearance: Clear
pH (as a concentrate): 6.5 – 7.4
Solubility in Water (By Weight): Complete
Odor: None
Molecular Weight: ND
Boiling Point (760 mmHg): ND
Freezing Point: ND
Specific Gravity (H₂O = 1): ND
Vapor Pressure at 20 C: ND
Vapor Density (air = 1): ND
Evaporation Rate (Butyl Acetate = 1): ND
Melting Point: ND

Section 10. Stability and Reactivity

Conditions to Avoid: None Known
Incompatible Materials: None known
Hazardous Polymerization: Will not occur.
Hazardous Decomposition: Will not occur.

Section 11. Toxicological Information

Hemodialysis Acetate Concentrate was tested and determined not to be toxic to humans.

Cancer Related Information:

Ingredient	CAS Numbers	NTP	IARC	OSHA
Sodium Chloride	7647-14-5	Known: NO Anticipated: NO	None	NO
Dextrose	50-99-7	Known: NO Anticipated: NO	None	NO
Calcium Chloride	10043-52-4	Known: NO Anticipated: NO	None	NO
Potassium Chloride	7447-40-7	Known: NO Anticipated: NO	None	NO
Magnesium Chloride	7786-30-3	Known: NO Anticipated: NO	None	NO
Sodium Acetate	127-09-3	Known: NO Anticipated: NO	None	NO
Water	7732-18-5	Known: NO Anticipated: NO	None	NO

Section 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found

Section 13. Disposal Considerations

Dispose of this product in accordance with all applicable, Federal, State and Local regulations.

Section 14. Transport Information

This product is not defined as a hazardous material in accordance with the Department of Transportation.

Section 15. Regulatory Information

International Inventory Status:

Ingredient	CAS Numbers	EC	Japan	Australia	Korea	Canada: DSL	Canada: NDSL
Sodium Chloride	7647-14-5	YES	YES	YES	YES	YES	NO
Dextrose	50-99-7	YES	YES	YES	YES	YES	NO
Calcium Chloride	10043-52-4	YES	YES	YES	YES	YES	NO
Potassium Chloride	7447-40-7	YES	YES	YES	YES	YES	NO
Magnesium Chloride	7786-30-3	YES	YES	YES	YES	YES	NO
Sodium Acetate	127-09-3	YES	YES	YES	YES	YES	NO
Water	7732-18-5	YES	YES	YES	YES	YES	NO

United States:

Ingredient	CAS Numbers	OSHA	CAA	CWA	RCRA	SARA 302	SARA 313	TSCA
Sodium Chloride	7647-14-5	NO	NO	NO	NO	NO	NO	NO
Dextrose	50-99-7	NO	NO	NO	NO	NO	NO	NO
Calcium Chloride	10043-52-4	NO	NO	NO	NO	NO	NO	NO
Potassium Chloride	7447-40-7	NO	NO	NO	NO	NO	NO	NO
Magnesium Chloride	7786-30-3	NO	NO	NO	NO	NO	NO	NO
Sodium Acetate	127-09-3	NO	NO	NO	NO	NO	NO	NO
Water	7732-18-5	YES	NO	NO	NO	NO	NO	NO

CA Proposition 65: This product is not affected by CA Proposition 65.

WHMIS (Canada): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Section 16. Other Information

NFPA Ratings:

Flammability: 0
Health: 0
Reactivity: 0
Specific Hazard:

HMIS Ratings:

Flammability: 0
Health: 0
Reactivity: 0
PPE: B

Origination Date: 7/15/03
Revision Date: 07-14-06
Prepared by: Risk Manager