

Scientific Documentation

Ethyl Alcohol, 20 Percent w/ WFI, Downstream Bioprocess Solution, bioCERTIFIED (TM)

Not appropriate for regulatory submission.

Please visit www.spectrumchemical.com or contact Tech Services for the most up-to-date information contained in this information package.

Spectrum Chemical Mfg Corp
769 Jersey Avenue
New Brunswick, NJ 08901
Phone 732.214.1300



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Specification for Ethyl Alcohol, 20 Percent w/ WFI, Downstream Bioprocess Solution, bioCERTIFIED (TM) (E9200)

Item Number	E9200
Item	Ethyl Alcohol, 20 Percent w/ WFI, Downstream Bioprocess Solution, bioCERTIFIED (TM)
CAS Number	
Molecular Formula	
Molecular Weight	
MDL Number	
Synonyms	

Test	Specification	
	Min	Max
ASSAY (v/v)	19.0	21.0 %
ASSAY (w/w)	15.5	17.0 %
SPECIFIC GRAVITY @ 15.56°C	0.9749	0.9769
SPECIFIC GRAVITY @ 20°C	0.9747	0.9757
COLOR (Pt-Co)		10
ACIDITY	TO PASS TEST	
BIOBURDEN: YEAST & MOLD		10 cfu/100mL
BIOBURDEN: PLATE COUNT		10 cfu/100mL
APPEARANCE		
EXPIRATION DATE		
DATE OF MANUFACTURE		

Spectrum Chemical Mfg Corp

Corporate Headquarters:	West Coast Facility:
769 Jersey Ave.	14422 S. San Pedro St.
New Brunswick, NJ 08901	Gardena, CA 90248
732.214.1300	310.516.8000

Certificate Of Analysis

Item Number	E9200	Lot Number	2LG0280
Item	Ethyl Alcohol, 20 Percent w/ WFI, Downstream Bioprocess Solution, bioCERTIFIED (TM)		

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY (v/v)	19.0	21.0 %	20.0 %
ASSAY (w/w)	15.5	17.0 %	16.2 %
SPECIFIC GRAVITY @ 15.56°C	0.9749	0.9769	0.9755
SPECIFIC GRAVITY @ 20°C	0.9747	0.9757	0.9755
COLOR (Pt-Co)		10	<10
ACIDITY	TO PASS TEST		PASSES TEST
BIOBURDEN: YEAST & MOLD		10 cfu/100mL	<10 CFU/100ML
BIOBURDEN: PLATE COUNT		10 cfu/100mL	<10 CFU/100 ML
APPEARANCE			CLEAR, COLORLESS LIQUID
EXPIRATION DATE			13-JUN-2025
DATE OF MANUFACTURE			14-JUN-2022
ENDOTOXINS			<19.2 EU/ML

Certificate of Analysis Results Entered By:

TDAO
Tiffany DAO
30-AUG-22 12:30:52

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



Certificate of Analysis Results Approved By:

AWILLIAMS
Allison Williams
30-AUG-22 12:36:24

All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.

SAFETY DATA SHEET

spectrum®



Revision date 20-February-2020

Revision Number 1

1. Identification

Product identifier

Product Name Ethyl Alcohol 20% w/ WFI (40 Proof)

Other means of identification

Product Code(s) E9200

UN/ID no UN1170

Synonyms Ethyl Alcohol 14-18% ; Ethanol

Recommended use of the chemical and restrictions on use

Recommended use Solvent

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address

Spectrum Chemical Mfg. Corp.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Serious eye damage/eye irritation	Category 2
Flammable liquids	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Danger

Hazard statements

Causes serious eye irritation
Flammable liquid and vapor



Appearance Liquid

Physical state liquid

Odor sweet Alcohol

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ ventilating / lighting/ .? / equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

In case of fire: Use CO₂, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Synonyms

Ethyl Alcohol 14-18% ;. Ethanol.

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	80-86	*
Ethyl alcohol	64-17-5	14-20	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice

IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Inhalation	Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Large Fire	Dry chemical. Carbon dioxide (CO ₂). water spray. Alcohol resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Explosion data	
Sensitivity to mechanical impact	none.
Sensitivity to static discharge	yes.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other
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non-combustible material and transfer to containers for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 64-17-5	No data available	1000 ppm TWA 1900 mg/m ³ TWA	3300 ppm IDLH

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Hand protection

Wear suitable gloves. Impervious gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	liquid
Appearance	Liquid
Color	clear
Odor	sweet Alcohol
Odor threshold	No information available

Property	Values	Remarks • Method
pH	no data available	None known
Melting point / freezing point	-7 - -6 °C / 19.4 - 21.2 °F	None known
Boiling point / boiling range	87 - 90 °C / 188.6 - 194 °F	None known
Flash point	40.0 - 46.0 °C / 104 - 114.8 °F	None known
Evaporation rate	no data available	None known
Flammability (solid, gas)	no data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	19 %	
Lower flammability or explosive limits	3.3 %	
Vapor pressure	5.95	None known
Vapor density	1.6	None known
Relative density	0.972 - 0.977	None known
Water solubility	completely soluble	None known
Solubility(ies)	no data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	no data available	None known
Decomposition temperature		None known
Kinematic viscosity	no data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	Spontaneous polymerisation.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation

Specific test data for the substance or mixture is not available. May cause irritation of

respiratory tract.

Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact

Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 47,066.70 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	90 mL/kg (Rat)	-	-
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	-	124.7 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	-	Monograph 100E [2012] in alcoholic beverages Monograph 96 [2010] in alcoholic beverages	-	-

Legend

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Target organ effects

liver, respiratory system, Eyes, Skin, central nervous system, blood, Reproductive System.

Aspiration hazard

No information available.

Other adverse effects

No information available.

Interactive effects

No information available.

12. Ecological information

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
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Ethyl alcohol 64-17-5	-	LC50: 12.0 - 16.0mg/L (96h, Oncorhynchus mykiss) LC50: 13400 - 15100mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =10800mg/L (24h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)
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Persistence and degradability No information available.
Bioaccumulation Inherently biodegradable.

Component Information

Chemical name	Partition coefficient
Ethyl alcohol 64-17-5	-0.32

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

14. Transport information

DOT

UN/ID no UN1170
Proper Shipping Name: Ethanol solution
Hazard class 3
Packing group: III
Special Provisions 24, B1, IB3, T2, TP1
Marine Pollutant Severe Marine Pollutant
Description: UN1170, Ethanol solution, 3, III
Emergency Response Guide Number 127

TDG

UN-No: UN1170
Proper Shipping Name: Ethanol solution
Hazard class 3
Packing Group: III
Description: UN1170, Ethanol solution, 3, III

MEX

UN-No UN1170
Proper Shipping Name Ethanol solution
Hazard class 3
Special Provisions 144, 223
Packing Group III
Description UN1170, Ethanol solution, 3, III

ICAO (air)

UN-No: UN1170
Proper Shipping Name: Ethanol solution
Hazard class 3
Packing Group: III

Special Provisions A58, A180, A3
Description: UN1170, Ethanol solution, 3, III

IATA

UN number UN1170
Proper Shipping Name: Ethanol solution
Transport hazard class(es) 3
Packing group III
Description: UN1170, Ethanol solution, 3, III

IMDG

UN number UN1170
Proper shipping name Ethanol solution
Transport hazard class(es) 3
Packing group III
EmS-No F-E, S-D
Special Provisions 144, 223
Marine pollutant NP1
Description UN1170, Ethanol solution, 3, III, (40°C c.c.)

RID

UN number UN1170
Proper Shipping Name: Ethanol solution
Transport hazard class(es) 3
Packing group III
Classification code F1
Special Provisions 144, 601
Description: UN1170, Ethanol solution, 3, III
Labels 3

ADR

UN number 1170
Proper Shipping Name: Ethanol solution
Transport hazard class(es) 3
Packing group III
Classification code F1
Tunnel restriction code (D/E)
Special Provisions 144, 601
Description: 1170, Ethanol solution, 3, III, (D/E)
Labels 3

ADN

UN/ID No UN1170
Proper shipping name Ethanol solution
Transport hazard class(es) 3
Packing Group III
Classification code F1
Special Provisions 144, 601
Description UN1170, Ethanol solution, 3, III
Hazard label(s) 3
Limited quantity (LQ) 5 L
ventilation VE01
Equipment Requirements PP, EX, A

15. Regulatory information

International Inventories

TSCA Complies

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL Complies

EINECS/ELINCS	Complies
ENCS	This product complies with encs:
IECSC	This product complies with china:
KECL	Complies
PICCS	Complies
AICS	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA

Health hazards 2

Flammability 2

Instability 0

Physical and chemical properties -

HMIS

Health hazards 2 *

Flammability 2

Physical hazards 0

Personal protection X

Chronic Hazard Star Legend

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AELG(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCRID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date

20-February-2020

Revision Note

No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Certification of Compliance with current Good Manufacturing Practices

Dear Valued Customer:

Spectrum Chemical Mfg Corp certifies that the following product(s) is produced, processed, packaged and held in compliance with current Good Manufacturing Practices (cGMP) in accordance with the applicable parts of 21 CFR, parts 210 and 211 of the Code of Federal Regulations.

Catalog Number	Product Name
E9200	Ethyl Alcohol 20% w/ WFI Downstream Bioprocess Solution

Spectrum is an FDA registered and inspected Drug Establishment. Our United States Food and Drug Administration (USFDA) Registration numbers are as follows:

Spectrum-Gardena, CA: 2020632
Spectrum-New Brunswick, NJ: 2246824

Thank you for your interest in Spectrum products. If we may be of further assistance, please feel free to contact the Quality Assurance department at 310-516-8000 or via email at qualityassurance@spectrumchemical.com

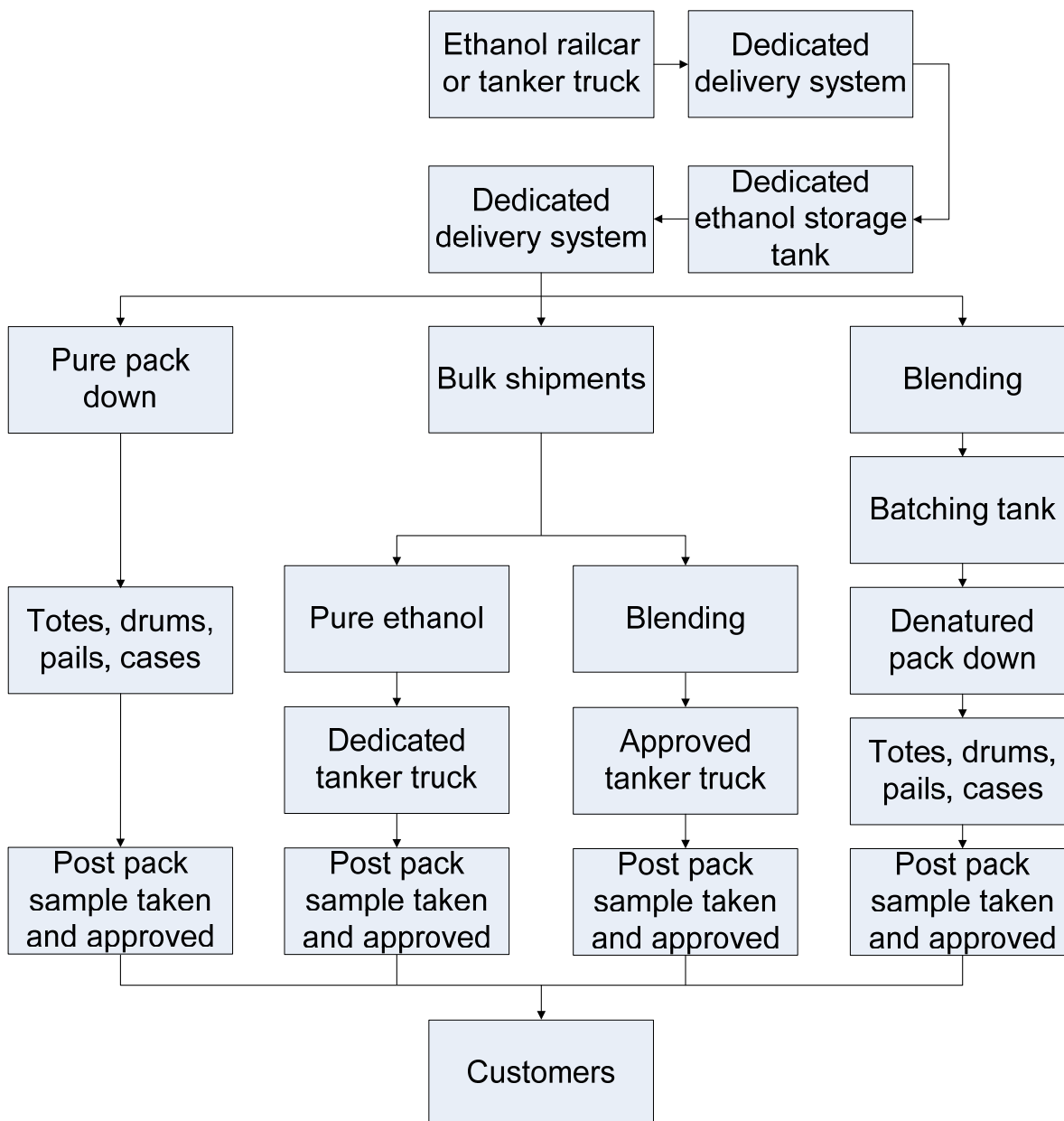
Sincerely,

A handwritten signature in black ink, appearing to read "Oralia Chavez", written in a cursive style.

Oralia Chavez
Quality Assurance Specialist

Manufacturing Process Flowchart

Dehydrated Alcohol, 200 Proof, Undenatured, USP - E9200



CORPORATE HEADQUARTERS

769 Jersey Avenue

New Brunswick, NJ 08901

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FAX 732.246.7132

WEST COAST FACILITY

14422 South San Pedro Street

Gardena, California 90248

PHONE 310.516.8000

FAX 310.516.9843

E9200, Ethyl Alcohol 20 Percent w/ WFI, Downstream Bioprocess Solution

Source Statement

The above mentioned catalog item is derived from plant derived material, Corn, and fermentation derived material, Enzymes and Yeast. No animal derived products are used in the manufacturing process.

BSE/TSE Statement

The above mentioned catalog item does not contain nor is manufactured using any animal derived products and is therefore, BSE/TSE free.

Allergen Statement

The above mentioned catalog item does not contain any of the following:

- Milk
- Egg
- Fish
- Shellfish
- Tree Nuts
- Wheat
- Peanuts
- Cereals containing Gluten
- Celery
- Mustard
- Sesame Seed
- Soy
- Latex
- Sulfites > 10 ppm

GMO Statement

The above mentioned catalog item is manufactured with the use of genetically modified organisms and might contain GMO's, but no detectable levels of GMO's are expected to be present.

Melamine Statement

The above mentioned catalog does not use or add melamine to the manufacturing process and is considered melamine-free.

Nitrosamine Statement

Based on knowledge of the manufacturing process, nitrosamine impurities are not known or suspected to be present in this material.

Animal Testing Statement

The above mentioned catalog item has not been tested on animals.

Organic Compliance Statement

The above mentioned catalog item has not been produced using irradiation, ethylene oxide (EtO) or sewage sludge.

Shelf Life Statement

The above mentioned catalog item is typically assigned a shelf life of 36 months from the date of manufacture. The actual assigned shelf life for any specific lot should be referenced on the Certificate of Analysis.

Other Chemicals Statement

Spectrum does not have any reason to suspect the above mentioned catalog item contains any of the following chemicals. This product does not come into contact with these chemicals during packaging or storage:

- | | |
|---------------------|--------------|
| • Aflatoxins | • Parabens |
| • Preservatives | • Pesticides |
| • Bisphenol A (BPA) | • Phthalates |

Label Information

The Spectrum label presents technical and safety information in an easily understood format. Our technical specialists stay abreast of the latest requirements of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS), as well as the Occupational Safety and Health Administration (OSHA), the Food and Drug Administration (FDA) and other government regulatory agencies in order to ensure compliance, accuracy and concise hazard communication.

WARNING

- Flammable liquid and vapor • Causes serious eye irritation.
- Keep away from heat, sparks, open flames, hot surfaces • No smoking • Ground container and receiving equipment • Use explosion-proof equipment • Use only non-sparking tools • Take precautionary measures against static discharge • Wear protective gloves, eye protection, face protection • Wash face, hands and any exposed skin thoroughly after handling.

FIRST AID: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IN CASE OF FIRE: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish.

KEEP FROM CHILDREN

spectrum
CHEMICAL MFG CORP

E9200 **1 GL**

Ethanol 20% w/ WFI

Downstream Bioprocess Solution

CAUTION: For manufacturing, process solvent or laboratory use only. Not intended for use as an active ingredient in drug manufacturing, disinfectant or medical device. The suitability of the finished product for injection purposes is the sole responsibility of the end user. **Read and understand the label and Safety Data Sheet (SDS) prior to use.**

DOT: UN1170, Ethanol solution, 3, PG III

Chemical Emergency: (800)424-9300

www.SpectrumChemical.com

20 percent Grain Derived Ethyl Alcohol by volume, made with "USP Injection Grade Water". Not Sterile.

DSP-CT-18, Packaged at Greenfield Global USA, Inc.

Components:

Water.....	CAS 7732-18-5
Ethyl Alcohol	CAS 64-17-5

Assay19.0-21.0% v/v
Assay15.5-17.0% w/w
Specific Gravity @ 15.56°C.....0.9749-0.9769
Specific Gravity @ 20°C.....0.9747-0.9757

MAXIMUM LIMITS

Color (Pt-Co).....	10
Acidity	To pass test
Bacterial Endotoxins	19.2 EU/mL
Bioburden: Yeast & Mold	10 cfu/100 mL
Bioburden: Plate Count	10 cfu/100 mL

⚠ WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov

Product filtered prior to filling. Particles inherent to the packaging may be present.

Keep container tightly closed.

R 2/J2GHS A **0** Lot No. 062233

SPECTRUM CHEMICAL MFG. CORP. Gardena, CA 90248 • New Brunswick, NJ 08901

- | | | |
|---|---|---|
| <p>A Bar Code</p> <p>B GHS Hazard Pictograms</p> <p>C Warning, Safety Data and Precautionary Information</p> <p>D Product Catalog Number</p> <p>E Item Name, Form, Grade</p> <p>F Size/Quantity</p> | <p>G Chemical Abstracts Service (CAS) Registry Number</p> <p>H Caution Information</p> <p>I DOT Shipping Information</p> <p>J Toll-Free 24-Hour Chemical Emergency Telephone Number</p> | <p>K Empirical Formula, Formula Weight and Technical Specifications Panel</p> <p>L Expiration Information</p> <p>M Lot Number</p> <p>N Kosher Certified by Kosher Supervision of America (KSA).</p> <p>O Storage Color Band</p> <p>P Halal Certified by IFANCA</p> <p>Q bioCertified</p> |
|---|---|---|

This color-coded band indicates the hazard most likely to be posed by that material under storage conditions. The criteria used to assign band colors have been established by the Storage Code working group of the Society for Chemical Hazard Communication (SCHC). It is recommended that like colors be stored together, unless otherwise stated, based on the color codes indicated to the right. However, it is the responsibility of the customer to check with their local fire department for possible conflicts with our recommendations when storing hazardous chemicals.

- YELLOW:** Oxidizer
- RED:** Flammable
- GREEN:** General Storage
- BLUE:** Health Hazard
- WHITE:** Corrosive

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