Scientific Documentation

AC115, Acetone, NF

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.

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AC115, Acetone, NF

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Specification for Acetone, NF (AC115)

Item Number	AC115
Item	Acetone, NF
CAS Number	67-64-1
Molecular Formula	C_3H_6O
Molecular Weight	58.08
MDL Number	
Synonyms	

Test	Specification	
	Min	Max
ASSAY $[(CH_3)_2CO]$	99.0 %	
SPECIFIC GRAVITY @ 25oC		0.789
WATER		0.5 %
NONVOLATILE RESIDUE		0.004 %
READILY OXIDIZABLE SUBSTANCES		TO PASS TEST
ELEMENTAL IMPURITIES	AS REPORTED	
IDENTIFICATION		TO PASS TEST
CERTIFIED HALAL		
EXPIRATION DATE		
DATE OF MANUFACTURE		
APPEARANCE		
RESIDUAL SOLVENTS		TO PASS TEST

Spectrum Chemical Mfg Corp

Corporate Headquarters:	***West Coast Facility:***
769 Jersey Ave.	14422 S. San Pedro St.
New Brunswick, NJ 08901	Gardena, CA 90248
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Certificate Of Analysis

Item Number	AC115	Lot Number	2IL0284
Item	Acetone, NF	CAS Number	67-64-1
Molecular Formula	C_3H_6O	Molecular Weight	58.08

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY [$(CH_3)_2CO$]	99.0 %		99.98 %
SPECIFIC GRAVITY @ 25°C		0.789	0.787
WATER		0.5 %	0.34 %
NONVOLATILE RESIDUE		0.004 %	<0.004 %
READILY OXIDIZABLE SUBSTANCES		TO PASS TEST	PASSES TEST
ELEMENTAL IMPURITIES	AS REPORTED		NO ELEMENTAL IMPURITIES PRESENT
IDENTIFICATION		TO PASS TEST	PASSES TEST
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			15-DEC-2024
DATE OF MANUFACTURE			16-DEC-2019
APPEARANCE			CLEAR COLORLESS LIQUID
RESIDUAL SOLVENTS		TO PASS TEST	PASSES TEST
CLASS 1 (solvent) / BENZENE			<2 ppm
CLASS 2 (SOLVENT) / CUMENE			<70 ppm
CLASS 2 (SOLVENT) / METHANOL			<3000 ppm
CLASS 3 (solvent) / ETHANOL			<5000 ppm
CLASS 3 (solvent) / ETHYL ACETATE			<5000 ppm
CLASS 3 (solvent) / 1-PROPANOL			<5000 ppm

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

Certificate of Analysis Results Certified By:

Jigisha Patel
VP Regulatory Compliance & Technical Services, Regulatory

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.

The Elemental Impurities standards implemented by USP and other Pharmaceutical Compendia reflect a growing understanding of the toxicology of trace levels of elemental impurities that can remain in drug substances originating from either raw materials or manufacturing processes. Identifying and quantifying impurities can be critical to predicting the best possible patient outcomes. Elemental Impurities has been a requirement of all products meeting USP/NF, EP and BP monographs since January 1, 2018. More information can be found in USP sections <233> Elemental Impurities - Limits and <233> Elemental Impurities - Procedures. Data for drug substances furnished by Spectrum Chemical Mfg. Corp can be used to ensure that patient daily exposures by oral administration to the selected elements are not exceeded in the formulation of pharmaceutical products.

SAFETY DATA SHEET

Preparation Date: 1/15/2014 **Revision Date:** 4/04/2018 **Revision Number:** G4

1. IDENTIFICATION

Product identifier

Product code: AC115
Product Name: ACETONE, NF

Other means of identification
Synonyms: beta-Ketopropane
Dimethyl ketone
Dimethylformaldehyde
Dimethylketal
Ketone propane
Ketone, dimethyl
Methyl ketone
Propanone
Pyroacetic acid
Pyroacetic ether
Acétone (French)
Acetona (Spanish)
CAS #: 67-64-1
RTECS # AL3150000
CI#: Not available

Recommended use of the chemical and restrictions on use
Recommended use: Solvent.
Uses advised against No information available

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

Order Online At: https://www.spectrumchemical.com
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Serious eye damage/eye irritation	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

Label elements

Danger

Hazard statements
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause respiratory irritation. May cause drowsiness or dizziness
Highly flammable liquid and vapor

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Causes mild skin irritation
Repeated exposure may cause skin dryness or cracking

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — 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
Keep cool

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
In case of fire: Use CO_2, dry chemical, or foam to extinguish.
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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Acetone	67-64-1	99-100.5
Benzene	71-43-2	0-0.003
Formaldehyde	50-00-0	0-0.002

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention.

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

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms

Moderate eye irritation
Mild skin irritation
Nausea
Vomiting
Central nervous system effects
Dizziness
Drowsiness
Fatigue
Narcosis
Ataxia
Staggering gait
Headache
May affect respiration
Respiratory depression
May cause cardiovascular effects
Hypotension
Weak, rapid pulse or rapid heart rate (Tachycardia)
May cause metabolic acidosis

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO_2). Dry chemical. Alcohol-resistant foam. Water spray.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide.

Specific hazards: Flammable. May be ignited by heat, sparks or flames. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Container explosion may occur under fire conditions or when heated. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Actions for Firefighters

Specific Methods: Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice
Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:
Oxidizing agents
Reducing agents
Bases
Acids
activated carbon
chromium trioxide
dioxygen difluoride + carbon dioxide
Potassium dichromate or Sodium dichromate
Potassium t-butoxide
Hydrogen peroxide
Chromic anhydride
Chromyl chloride
Hexachloromelamine
Nitrosyl chloride + Platinum
Nitrosyl chloride
Bromine trifluoride
Thiodiglycol
2,4,6-trichloro-1,3,5-triazine + water
2-Methyl-1,3-butadiene
Chloroform

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	**OSHA**	**NIOSH**	**ACGIH**	**AIHA WEEL**
Acetone	67-64-1	1000 ppm TWA 2400 mg/m³ TWA	250 ppm TWA 590 mg/m³ TWA	750 ppm STEL 500 ppm TWA	None
Benzene	71-43-2	10 ppm TWA 1 ppm TWA 25 ppm Ceiling 5 ppm STEL	0.1 ppm TWA 1 ppm STEL	2.5 ppm STEL 0.5 ppm TWA	None
Formaldehyde	50-00-0	0.75 ppm TWA 2 ppm STEL	0.016 ppm TWA 0.1 ppm Ceiling 15 min	0.3 ppm Ceiling	None

Canada

Components	CAS-No.	**Canada - Alberta**	**Canada - British Columbia**	**Canada - Ontario**	**Canada - Quebec**
Acetone	67-64-1	500 ppm TWA 1200 mg/m³ TWA 750 ppm STEL 1800 mg/m³ STEL	250 ppm TWA 500 ppm STEL	500 ppm TWA 750 ppm STEL	500 ppm TWAEV 1190 mg/m³ TWAEV 1000 ppm STEV 2380 mg/m³ STEV
Benzene	71-43-2	0.5 ppm TWA 1.6 mg/m³ TWA 2.5 ppm STEL 8 mg/m³ STEL	0.5 ppm TWA 2.5 ppm STEL	0.5 ppm TWA 2.5 ppm STEL	1 ppm TWAEV 3 mg/m³ TWAEV 5 ppm STEV 15.5 mg/m³ STEV
Formaldehyde	50-00-0	1 ppm Ceiling 1.3 mg/m³ Ceiling 0.75 ppm TWA 0.9 mg/m³ TWA	0.3 ppm TWA 1 ppm Ceiling	1.5 ppm Ceiling 1.0 ppm STEL	2 ppm Ceiling 3 mg/m³ Ceiling

Australia and Mexico

Components	CAS-No.	**Australia**	**Mexico**
Acetone	67-64-1	1000 ppm STEL 2375 mg/m³ STEL 1185 mg/m³TWA 500 ppm TWA	1000 ppm TWA 2400 mg/m³ TWA 1260 ppm STEL 3000 mg/m³ STEL
Benzene	71-43-2	1.0 ppm//3.2 mg/m³ TWA confirmed carcinogen	1 ppm TWA 3.2 mg/m³ TWA 5 ppm STEL 16 mg/m³ STEL
Formaldehyde	50-00-0	1 ppm/1.2 mg/m³ TWA 2 ppm/2.5 mg/m³ STEL probable carcinogen	2 ppm Ceiling 3 mg/m³ Ceiling

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron
Long sleeved clothing
Gloves

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Liquid

Appearance:
No information available.

Color:
Clear. Colorless.

Odor:
Fruity. Mint-like. Fragrant. Ethereal.

Taste
Pungent. Sweetish.

Formula:
C3-H6-O

Molecular/Formula weight:
58.08

Flammability:
No information available

Flash point (°C):
-20 °C

Flashpoint (°C/°F):
-20 to -17 °C/-4 to 1.4 °F
-9.4 to -9 °C/15.1 to 15.8 °F

Flash Point Tested according to:
Closed cup
Open cup

Autoignition Temperature (°C/°F):
465 °C/869 °F

Lower Explosion Limit (%):
2.5-2.6%

Upper Explosion Limit (%):
12.8%

Melting point/range(°C/°F):
-94.7 to -95.4 °C/-138.46 to -139.72

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
56.2 °C/133.2 °F

Bulk density:
No information available

Density (g/cm3):
0.780 @ 30 °C
0.784 @ 25 °C
0.79 @ 20 °C

Specific gravity:
0.79 @ 20 °C

pH:
No information available

Vapor pressure @ 20°C (kPa): 24	**Evaporation rate:** 5.6 (Butyl acetate = 1)	**Vapor density:** 2.0
VOC content (g/L): 780-790	**Odor threshold (ppm):** 62-140	**Partition coefficient (n-octanol/water):** - 0.24
Viscosity: No information available	**Miscibility:** Miscible with water Miscible with Ether Miscible with Chloroform Miscible with Benzene Miscible with alcohol	**Solubility:** No information available

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents
Reacts with reducing agents
Reactive with acids
Reacts with strong bases
Acetone ignites on contact with activated carbon, chromium trioxide, dioxygen difluoride + carbon dioxide, potassium-tert-butoxide, sulfuric acid + potassium dichromate
Acetone may form explosive mixtures with chromic anhydride, chromyl chloride, hexachloromelamine, hydrogen peroxide, nitric acid and acetic acid, nitric acid and sulfuric acid, nitrosyl chloride, nitrosyl chloride + platinum, nitrosyl perchlorate, nitryl perchlorate, permonosulfuric acid, potassium tert-butoxide, thiodiglycol, chloroform, bromine trifluoride, thiotrithiazyl perchlorate, 2,4,6-trichloro-1,3,5-triazine + water, 2-methyl-1,3-butadiene, peroxomonosulfuric acid
An explosion occurred during an attempt to prepare bromoform from acetone by the haloform reaction
Chloroform and acetone interact vigorously and exothermally in presence of solid potassium hydroxide or calcium hydroxide to form 1,1,1-trichloro-2-hydroxy-2-methylpropane

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials:
Oxidizing agents
Reducing agents
Bases
Acids
activated carbon
chromium trioxide
dioxygen difluoride + carbon dioxide
Potassium dichromate or Sodium dichromate
Potassium t-butoxide
Hydrogen peroxide
Chromic anhydride
Chromyl chloride
Hexachloromelamine
Nitrosyl chloride + Platinum
Nitrosyl chloride
Bromine trifluoride
Thiodiglycol
2,4,6-trichloro-1,3,5-triazine + water
2-Methyl-1,3-butadiene
Chloroform

Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Skin. Eyes. Inhalation.

Acute Toxicity

Component Information

Acetone	
CAS-No.	67-64-1

LD50/oral/rat = 5800 mg/kg Oral LD50 Rat
LD50/oral/mouse = 3 gm/kg
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = 50100 mg/m^3 Inhalation LC50 Rat 8 h
LC50/inhalation/mouse = 44 gm/m^3/4H
Other LD50 or LC50information = >9400 uL/kg LD50 Dermal Guinea Pig
5340 mg/kg LD50 Oral Rabbit

Benzene	
CAS-No.	71-43-2

LD50/oral/rat = 810 mg/kg Oral LD50 Rat = 1800 mg/kg Oral LD50 Rat; 930-6400 mg/kg (RTECS)
LD50/oral/mouse = 4700 mg/kg
LD50/dermal/rabbit = >9400 mg/kg Dermal LD50 Rabbit (RTECS)
>8200 mg/kg (LOLI)
LD50/dermal/rat = No information available
LC50/inhalation/rat = 13050 - 16000 ppm Inhalation LC50 Rat 4 h (EU Commission IUCLID dataset)
44.66 mg/L Inhalation LC50 Rat 4 h (LOLI)
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = >9400 ul/kg LD50 Guinea Pig

Formaldehyde	
CAS-No.	50-00-0

LD50/oral/rat = 500 mg/kg Oral LD50 Rat (RTECS and LOLI)
100 mg/kg (RTECS)
LD50/oral/mouse = 500 mg/kg (RTECS)
385 mg/kg (RTECS)
42 mg/kg (RTECS)
LD50/dermal/rabbit = 270 mg/kg Dermal LD50Rabbit
LD50/dermal/rat = No information available
LC50/inhalation/rat = 0.578 mg/L Inhalation LC50 Rat 4 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = 260 mg/kg oral LD50 Guinea Pig

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 5800

LD50/oral/mouse =
Value - Acute Tox Oral = 3000 mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = 20000 mg/kg

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = 76 mg/l (4-hr)
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	May cause skin irritation. Mildly to moderately irritating to the skin. It may be absorbed through the skin. If absorbed through skin it may cause systemic effects with symptoms similar to those of ingestion.
Eye Contact:	Causes eye irritation. Moderately irritating to the eyes. May cause corneal injury.
Inhalation	Irritating to respiratory system. May cause conjunctival irritation. May cause nausea, vomiting. May cause loss of appetite. May affect the brain. May affect the kidneys. May cause muscle weakness. May affect respiration (respiratory depression). Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unsteady gait, drowsiness, lethargy, sleepiness lightheadedness, fainting, narcosis, confusion, loss of coordination, lassitude, speech abnormalities, tremor, unconciousness, coma. May cause metabolic acidosis. May cause other symptoms similar to those of ingestion.
Ingestion	May cause digestive (gastointestinal) tract irritation. Ingestion may cause nausea, vomiting. It may affect metabolism (ketosis/ketonemia/ketonuria). May cause hyperglycemia. May affect liver. May affect respiration. May affect the cardiovascular system (hypotension). May affect the cardiovascular system (weak rapid pulse, tachycardia). May cause metabolic acidosis. May affect urinary system (kidneys). It may affect the joints. It may affect the skeletal muscles. It may affect behavior/central nervous system (depression, headache, tremors, ataxia, hyperesthesia, stupor, sedation, fatigue, excitement, seizures, coma).
Aspiration hazard	No information available.

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

Chronic Toxicity	Prolonged or repeated skin contact may cause defatting and drying of the skin, and brittle nails. Prolonged or repeated inhalation may affect the brain. Prolonged or repeated inhalation may affect the blood (changes in red blood cell count, granulocytopenia). Prolonged or repeated inhalation may affect the cardiovascular system. Prolonged or repeated inhalation may affect the thyroid (evidence of thyroid hyperfunction). Prolonged or repeated ingestion may affect the spleen. Prolonged or repeated ingestion may affect the bladder. Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated ingestion may

affect the blood (normocytic anemia, macrocytosis). Prolonged or repeated inhalation may cause eye and throat irritation and bronchitis. Prolonged or repeated inhalation may cause nausea, gastritis, loss of appetite, and weight loss. Prolonged or repeated inhalation may cause central nervous system effects such as weakness, dizziness, drowsiness, and vertigo.

Sensitization: No information available.

Mutagenic Effects: May affect genetic material
Sex Chromosome Loss and Nondisjunction in Saccharomyces cerevisiae (yeast)
Cytogenetic analysis (Hamster fibroblast)

Carcinogenic effects: Not classifiable as a human carcinogen.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Acetone	67-64-1	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed
Benzene	71-43-2	Monograph 100F [2012] Supplement 7 [1987] Monograph 29 [1982]	A1 Confirmed Human Carcinogen	Known Human Carcinogen	Present see 29 CFR 1910.1028	Present includes pure substance or mixtures containing >=0.1% (w/w) concentration. Restricted use: all uses involving Benzene as a feedstock containing >50% of Benzene by volume;genuine research or analysis	Not listed
Formaldehyde	50-00-0	Group 1 - Carcinogenic to Humans - Monograph 100F [2012] Monograph 88 [2006] Monograph 62 [1995] Supplement 7 [1987]	A2 Suspected Human Carcinogen	Known Human Carcinogen	Present see 29 CFR 1910.1048	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity Suspected of damaging fertility or the unborn child

Reproductive Effects: No information available
Developmental Effects: Possible risk of harm to the unborn child
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure Respiratory system. central nervous system.
STOT - repeated exposure No information available.
Target Organs: Skin. Central nervous system. Peripheral nervous system. Kidneys. Liver.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Acetone - 67-64-1
Freshwater Fish Species Data: 4.74 - 6.33 mL/L LC50 Oncorhynchus mykiss 96 h 1
8300 mg/L LC50 Lepomis macrochirus 96 h 1
6210 - 8120 mg/L LC50 Pimephales promelas 96 h static 1
Water Flea Data: 10294 - 17704 mg/L EC50 Daphnia magna 48 h
12600 - 12700 mg/L EC50 Daphnia magna 48 h

Benzene - 71-43-2
Freshwater Algae Data: 29 mg/L EC50 Pseudokirchneriella subcapitata 72 h
Freshwater Fish Species Data: 10.7 - 14.7 mg/L LC50 Pimephales promelas 96 h flow-through 1 5.3 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1 22.49 mg/L LC50 Lepomis macrochirus 96 h static 1 28.6 mg/L LC50 Poecilia reticulata 96 h static 1 22330 - 41160 µg/L LC50 Pimephales promelas 96 h static 1 70000 - 142000 µg/L LC50 Lepomis macrochirus 96 h static 1
Water Flea Data: 8.76 - 15.6 mg/L EC50 Daphnia magna 48 h 10 mg/L EC50 Daphnia magna 48 h

Formaldehyde - 50-00-0
Freshwater Fish Species Data: 0.032 - 0.226 mL/L LC50 Oncorhynchus mykiss 96 h flow-through 1
100 - 136 mg/L LC50 Oncorhynchus mykiss 96 h static 1
22.6 - 25.7 mg/L LC50 Pimephales promelas 96 h flow-through 1
23.2 - 29.7 mg/L LC50 Pimephales promelas 96 h static 1
1510 µg/L LC50 Lepomis macrochirus 96 h static 1
41 mg/L LC50 Brachydanio rerio 96 h static 1
Water Flea Data: 11.3 - 18 mg/L EC50 Daphnia magna 48 h
2 mg/L LC50 Daphnia magna 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Acetone	67-64-1	None	None	None	U002 Ignitable waste
Benzene	71-43-2	None	None	None	U019 ignitable waste, toxic waste
Formaldehyde	50-00-0	None	None	None	U122

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1090
Proper Shipping Name:	Acetone
Hazard Class:	3
Subsidiary Class	No information available
Packing group:	II
Emergency Response Guide Number	No information available
Marine Pollutant	No data available
DOT RQ (lbs):	5000 lbs./2270 kg
Special Provisions	No Information available
Symbol(s):	[DOT]: (R5) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 5000 pounds (2270 Kilograms).
Description:	UN1090,Acetone ,3,,PG II

TDG (Canada)

UN-No:	UN1090
Proper Shipping Name:	Acetone
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
Marine Pollutant	No Information available
Description:	ACETONE,3,UN1090,PG II

ADR

UN-No:	UN1090
Proper Shipping Name:	Acetone
Hazard Class:	3
Packing Group:	II
Subsidiary Risk:	No information available
Description:	UN1090 Acetone,3,II

IMO / IMDG

UN-No:	UN1090
Proper Shipping Name:	Acetone (Acetone solutions)
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
Marine Pollutant	No information available
EMS:	F-E

RID

UN-No:	UN1090
Proper Shipping Name:	Acetone
Hazard Class:	3
Subsidiary Risk:	3
Packing Group:	II
Description:	UN1090 Acetone,3,II,RID

ICAO

UN-No:	UN1090
Proper Shipping Name:	Acetone
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
Description:	Acetone,3,UN1090,PG II

IATA

UN-No:	UN1090
Proper Shipping Name:	Acetone
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
ERG Code:	3H
Special Provisions	No information available
Description:	UN1090,Acetone,3,PG II

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Acetone	67-64-1	Present (ACTIVE)	Present KE-29367	Present	Present (2)-542	Present	Present	Present 200-662-2
Benzene	71-43-2	Present(ACTIVE)	Present KE-02150	Present	Present (3)-1	Present	Present	Present 200-753-7
Formaldehyde	50-00-0	Present(ACTIVE)	Present KE-17074	Present	Present (2)-482	Present	Present	Present 200-001-8

U.S. Regulations

Acetone

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: Present (sn 006)
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
= 1 lb RQ (land/water)
= 5000 lb RQ (air)
Louisana Reportable Quantity List for Pollutants: Listed
California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 173.210
FDA - 21 CFR - Total Food Additives 173.210 175.105 175.320 176.180 176.300 177.2600 73.1 73.30 73.345 73.615

Benzene

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0197
New Jersey (EHS) List: 0197 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Present
Special hazardous substance
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
Michigan - Critical Materials List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
10 lb RQ
1 lb RQ
Connecticut - Carcinogenic Substances: Present
Louisana Reportable Quantity List for Pollutants: 10lbfinal RQreceives an adjustable RQ of 10 lbs based on potential carcinogenicity in August 14, 1989 final rule
4.54kgfinal RQreceives an adjustable RQ of 10 lbs based on potential carcinogenicity in August 14, 1989 final rule
California Directors List of Hazardous Substances: Present

FDA - 21 CFR - Total Food Additives 172.560, 175.105

Formaldehyde

Massachusetts RTK: Present
Massachusetts EHS: carcinogen; extraordinarily hazardous
New Jersey RTK Hazardous Substance List: 0946
New Jersey (EHS) List: 0946 500 lb TPQ

New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 175lbTQ
15000lbTQ
Pennsylvania RTK: Environmental hazard
Special hazardous substance
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
Michigan PSM HHC: = 1000 lb TQ
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
100 lb RQ
1 lb RQ
Louisana Reportable Quantity List for Pollutants: 100lbfinal RQ
45.4kgfinal RQ
California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 173.340
FDA - 21 CFR - Total Food Additives 173.340 175.105 175.210 175.300 176.170 176.180 176.200 177.1200 177.2410 178.3120 573.460

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

⚠WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov.

Chemicals Known to the State of California to Cause Reproductive Toxicity:

⚠WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

Components	CAS-No.	**Carcinogen**	**Developmental Toxicity**	**Male Reproductive Toxicity**	**Female Reproductive Toxicity:**
Acetone	67-64-1	Not Listed	Not Listed	Not Listed	Not Listed
Benzene	71-43-2	carcinogen	developmental toxicity	male reproductive toxicity	Not Listed
Formaldehyde	50-00-0	carcinogen	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	**CERCLA - Hazardous Substances and their Reportable Quantities**	**Section 302 Extremely Hazardous Substances and TPQs**	**Section 302 Extremely Hazardous Substances and RQs**	**Section 313 - Chemical Category**	**Section 313 - Reporting de minimis**
Acetone	67-64-1	5000 lb final RQ 2270 kg final RQ	None	None	None	None
Benzene	71-43-2	10 lb final RQ 4.54 kg final RQ	None	None	None	0.1 % de minimis concentration
Formaldehyde	50-00-0	100 lb final RQ 45.4 kg final RQ	100 lb EPCRA RQ	None	None	0.1 % de minimis concentration

U.S. TSCA

Components	CAS-No.	**TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)**	**TSCA 8(d) -Health and Safety Reporting**
Acetone	67-64-1	Not Applicable	Not Applicable
Benzene	71-43-2	Not Applicable	Not Applicable
Formaldehyde	50-00-0	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: .

Component	WHMIS 2015 Hazard Classification
Acetone 67-64-1 (99-100.5)	Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Category 2A: H319 Causes serious eye irritation.
Benzene 71-43-2 (0-0.003)	Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Germ cell mutagenicity - Category 1B: H340 May cause genetic defects.; Carcinogenicity - Category 1A: H350 May cause cancer.; Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure.; Aspiration hazard - Category 1: H304 May be fatal if swallowed and enters airways.
Formaldehyde 50-00-0 (0-0.002)	Flammable gases - Category 1: H220 Extremely flammable gas.; Flammable liquids - Category 3: H226 Flammable liquid and vapour. (solution, 37%); Corrosive to Metals - Category 1: H290 May be corrosive to metals. (solution, 37%); Acute toxicity - Oral - Category 4: H302 Harmful if swallowed. (solution, 37%); Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin. (solution, 37%); Acute toxicity - Inhalation - Category 2: H330 Fatal if inhaled.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation. (solution, 37%); Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage. (solution, 37%); Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Skin sensitizers - Category 1A: H317 May cause allergic skin reaction. (solution, 37%); Germ cell mutagenicity - Category 2: H341 Suspected of causing genetic defects.; Carcinogenicity - Category 1A: H350 May cause cancer.; Reproductive Toxicity - Category 1: H360 May damage fertility or the unborn child. (solution, 37%; contains 16% of a substance that is toxic to reproduction (Methyl alcohol)); Specific target organ toxicity - Single exposure - Category 2: H371 May cause damage to organs. (solution, 37%); Specific target organ toxicity - Single exposure - Category 3: H335 May cause respiratory irritation.; Specific target organ toxicity - Single exposure - Category 3: H336 May cause drowsiness or dizziness. (solution, 37%)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class
B2 Flammable liquid
D2B Toxic materials

Components	WHMIS 1988
Acetone	B2 D2B
Benzene	B2,D2A,D2B
Formaldehyde	A B1 D1A D2A D2B B3 D1A D2A D2B E regulated under Formol

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

Components	**WHMIS Ingredient Disclosure List -**
Acetone	1 %
Benzene	0.1 %
Formaldehyde	0.1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Acetone	67-64-1	Present	Not Listed
Benzene	71-43-2	Present	Not Listed
Formaldehyde	50-00-0	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances

Acetone	67-64-1	Not listed
Benzene	71-43-2	Present
Formaldehyde	50-00-0	Present
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Acetone	67-64-1	Not listed
Benzene	71-43-2	Not listed
Formaldehyde	50-00-0	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Acetone	67-64-1	
Benzene	71-43-2	Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.; Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation.; Germ cell mutagenicity - Muta. 1B: H340 May cause genetic defects.; Carcinogenicity - Carc. 1A: H350 May cause cancer.; Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (No information to prove exclusion of certain routes of exposure); Aspiration hazard - Asp. Tox. 1: H304 May be fatal if swallowed and enters airways.601-020-00-8
Formaldehyde	50-00-0	

EU - CLP (1272/2008)

R-phrase(s)

R11 - Highly flammable.
R36 - Irritating to eyes.
R66 - Repeated exposure may cause skin dryness or cracking.
R67 - Vapors may cause drowsiness and diziness.

S -phrase(s)

S 9 - Keep container in a well-ventilated place.
S16 - Keep away from sources of ignition - No smoking.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Components	CAS-No.	**Classification**	**Concentration Limits:**	**Safety Phrases**
Acetone	67-64-1	F; R11 Xi; R36 R66 R67	No information	S2 S9 S16 S26
Benzene	71-43-2	F; R11 Xi; R36/38 Carc.Cat.1; R45 Muta.Cat.2; R46 T; R48/23/24/25 Xn; R65	No information	S53 S45
Formaldehyde	50-00-0		0.2%<=C<1% Xi;R43	S(1/2)-S26-S36/37/39-

			1%<=C<5% Xn;R40-43 25%<=C T;R23/24/25-34-40-43 5%<=C<25% Xn;R20/21/22-36/37/38-40-43	S45-S51

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xi - Irritant.
F - Highly flammable.

16. OTHER INFORMATION

Preparation Date: 1/15/2014
Revision Date: 4/04/2018
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

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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
AC115	Acetone, NF

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

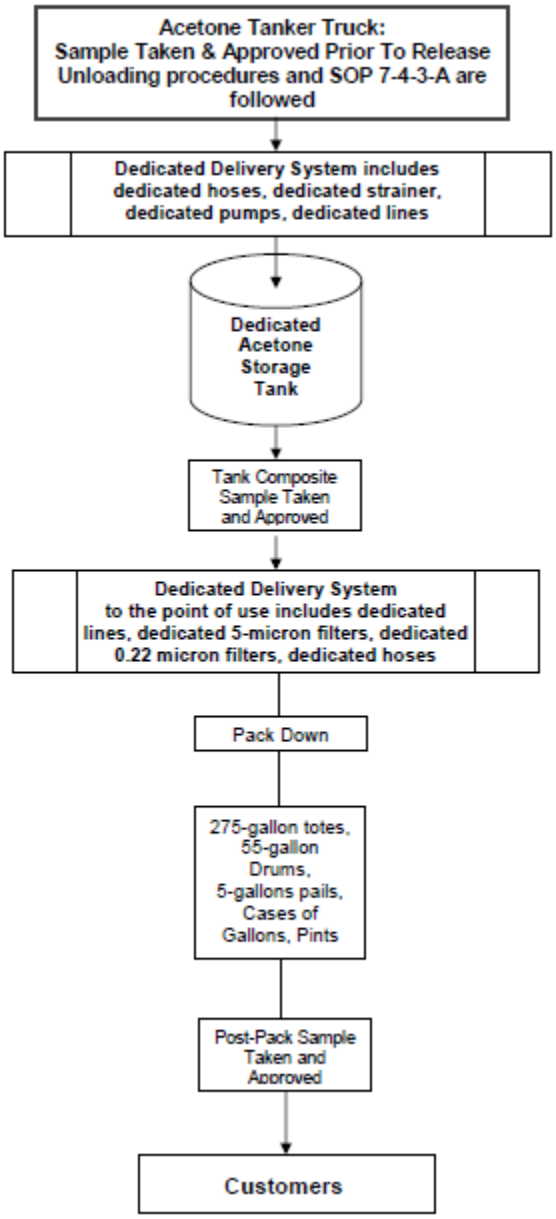
Thank you for your interest in Spectrum products. If we may be of further assistance, please feel free to contact the Quality Assurance department at 310-516-8000 or via email at qualityassurance@spectrumchemical.com

Sincerely,

Oralia Chavez
Quality Assurance Specialist

Manufacturing Process Flowchart

Acetone, NF (Cat# AC115)



CORPORATE HEADQUARTERS

769 Jersey Avenue

New Brunswick, NJ 08901

PHONE 732.214.1300

FAX 732.246.7132

WEST COAST FACILITY

14422 South San Pedro Street

Gardena, California 90248

PHONE 310.516.8000

FAX 310.516.9843

AC115, Acetone, NF

Source Statement

The above mentioned catalog item is manufactured by chemical synthesis. No animal or plant 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
- Soy
- Cereals containing Gluten
- Celery
- Mustard
- Sesame Seed
- Corn
- Latex
- Sulfites > 10 ppm

EU Fragrance Allergen Statement

The above mentioned catalog item does not contain any of the 26 EU fragrance allergens listed in Annex III lines 67-92. These substances are not intentionally added to the following chemical and therefore are not expected to be present.

GMO Statement

The above mentioned catalog item is manufactured without the use of genetically modified organisms and is therefore GMO free.

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 GMOs, irradiation, ethylene oxide (EtO) or sewage sludge.

Shelf Life Statement

The above mentioned catalog item is typically assigned a shelf life of 60 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
- Antibiotics
- Bisphenol A (BPA)
- CMR Substances
- Parabens
- Pesticides
- Phthalates
- Preservatives

spectrum®

RE: Elemental Impurities - Acetone, NF (Cat# AC115)

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above mentioned material complies with the USP<232>, <233> Elemental Impurities and the ICH Q3D Elemental Impurities Guideline. No Class 1, Class 2A, Class 2B or Class 3 elemental impurities are likely to be present. These substances are not used in the production process, are not intentionally added or known to be present in the above mentioned material.

This information is subject to change and is intended for risk assessment only. It is responsibility of the end user to evaluate suitability of any chemical for the intended use as well as to assess compound-specific limits of daily intake of metal impurities. For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at TechServices@spectrumchemical.com.

Sincerely,

Technical Services
Spectrum Chemical Mfg. Corp.

This document has been produced electronically and is valid without a signature.

CORPORATE HEADQUARTERS
769 Jersey Avenue
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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

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RE: Residual Solvents - Acetone, NF (Cat# AC115)

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above mentioned catalog item complies with the requirements of USP <467> Residual Solvents and ICH Q3C Residual Solvents Guideline. The following solvents are likely to be present:

Residual Solvent	Class	Expected Concentration
Benzene	1	< 2 ppm
Cumene	2	< 70 ppm
Methanol	2	< 3000 ppm
Ethanol	3	< 5000 ppm
Ethyl Acetate	3	< 5000 ppm
1-Propanol	3	< 5000 ppm

No other solvents are used or produced in the manufacturing process of this material.

For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at TechServices@spectrumchemical.com.

Sincerely,

Technical Services
Spectrum Chemical Mfg. Corp.

This document has been produced electronically and is valid without a signature.

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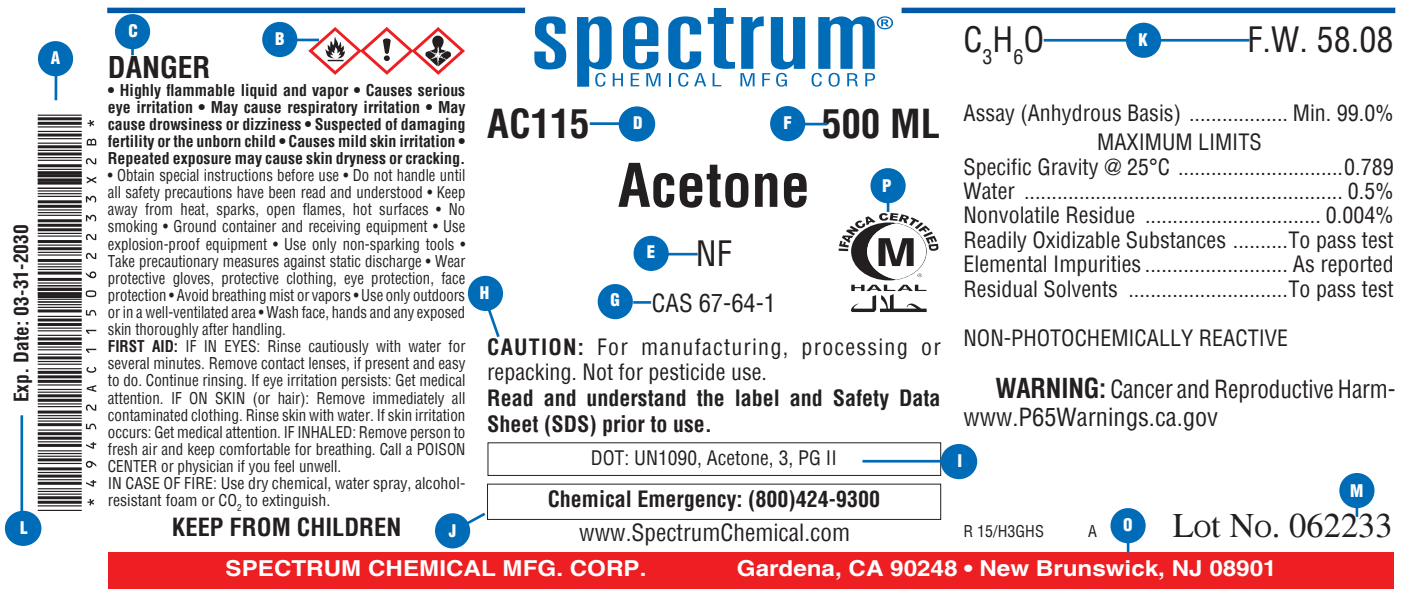
Label Information

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.



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

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

Spectrum Chemical Mfg Corp

Corporate Headquarters:
769 Jersey Ave.
New Brunswick, NJ 08901
732.214.1300

West Coast Facility:
14422 S. San Pedro St.
Gardena, CA 90248
310.516.8000

spectrum®

RE: Lot Numbering System

Dear Valued Customer:

This letter is to inform you of Spectrum Chemicals and Laboratory Products' Lot Numbering System. The system is based on an alpha-numerical sequence which provides the month, year and location of production.

The lot numbering system utilized until 2010 is a sequence of **six characters**, two letters followed by four numbers. The first letter represents the year, for example, Y denotes 2009 and Z denotes 2010. The second letter represents the month and site, for example, A-L denotes January through December at Spectrum's Gardena, CA facility, while M-X denotes January through December at the New Brunswick, NJ facility. The following four numbers are sequentially assigned.

Example: ZI0928 = The 928th material produced in California in September 2010

The lot numbering system utilized for 2011 and forward, is a sequence of **seven characters**. The first character, a number, represents the production facility:

1 = Gardena, CA Facility
2 = New Brunswick, NJ Facility
3 = China Facility
4 = Pharmacy, NJ Facility

The second character, a letter, represents the year. For example, A denotes 2011 and B denotes 2012. The third character, a letter, represents the month, with A denoting January and L denoting December. The following four numbers are sequentially assigned.

Example: 2AA0706 = The 706th material produced in New Jersey in January 2011

Thank you for your interest with Spectrum products. Please feel free to contact us at 310-516-8000 or via email at quality_assurance@spectrumchemical.com if we may be of further assistance.

Sincerely,

Oralia Chavez,
Quality Assurance Specialist

CORPORATE HEADQUARTERS
769 Jersey Avenue
New Brunswick, NJ 08901
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FAX 732.246.7132

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Gardena, California 90248
PHONE 310.516.8000
FAX 310.516.9843

المجلس الإسلامي الأمريكي للغذاء و التغذية

THE ISLAMIC FOOD AND NUTRITION COUNCIL OF AMERICA

IFANCA HALAL PRODUCT CERTIFICATE شهادة حلال

This is to certify that the following product(s) have been produced under the supervision of the Islamic Food and Nutrition Council of America(IFANCA). The production facility as well as component ingredients have been reviewed and approved. The product(s) are in compliance with the halal requirements under Islamic laws.

Date: **November 02, 2021**

Document #: **11205.11206.II213874**

Company Name & Address: **Spectrum Laboratory Products, Inc.** 755-769 Jersey Ave New Brunswick, New Jersey 08901 USA

Plant Name & Address: **Spectrum Laboratory Products, Inc.** 769-Jersey Ave New Brunswick, New Jersey 08901 USA

	ProductName	Product Code	Halal-ID	Product Certificate #
1.	Acetone, NF	AC115	B93981	HC-21SP7168

Muhammad Munir Chaudry, Ph.D.
President

THE ISLAMIC FOOD AND NUTRITION COUNCIL OF AMERICA INCORPORATED ILLINOIS 1982

This Certificate is valid until **August 31, 2022** and subject to renewal at that time.

WORLD HALAL FOOD COUNCIL WHFC MEMBER

WWW.IFANCA.ORG • IFANCA Head Office • 777 Busse Highway • Park Ridge, Illinois 60068 USA • Tel: (847) 993-0034 • Fax (847) 993-0038

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