Material Safety Data Sheet
ANSI Format

Centrum Liquid

Preparation Date 12-Feb-2007 **Revision Date** 28-Jan-2010 **Revision Number** 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Centrum Liquid
Common Name Not available
Chemical Name Not applicable
Synonyms Centrum
Product Use Pharmaceutical product
Classification Vitamin

Supplier
Wyeth
P.O. Box 8299
Philadelphia, PA 19101 USA.
Telephone: 1-610-688-4400

Emergency Telephone Number
Chemtrec USA, Puerto Rico, Canada 1-800-424-9300
Chemtrec International 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview
This contains an active pharmaceutical ingredient that can affect body functions; handle with caution.

Appearance Liquid **Physical State** Liquid **Odor** Not available

Potential Physical Hazards Combustible liquid

Potential Health Effects

Eyes Not available
Skin Not available
Inhalation Not available
Ingestion Long-term intake of high levels of Vitamin A, other than from beta-carotene, may increase the risk of osteoporosis in postmenopausal women.

Please see Patient Package Insert for further information.

Therapeutic Target Organ(s) Systemic.

Not listed by OSHA, NTP or IARC.

Potential Environmental Effects There is no known ecological information for this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name	CAS-No	Composition
Ethanol	64-17-5	5.715%

Common Name	CAS-No	Composition
Zinc Gluconate	4468-02-4	0.156%
Sodium Benzoate	532-32-1	0.133%
Chromic Chloride	10025-73-7	0.001%
Ferrous Gluconate	6047-12-7	0.518%
D-Panthenol	81-13-0	0.128%
Biotin	56-85-5	0.003%
Vitamin B6 (Pyridoxine Hydrochloride)	58-56-0	0.021%
Vitamin E (acetate)	58-95-7	0.48%
Thiamine Hydrochloride	67-03-8	0.018%
Vitamin B12 (Cyanocobalamin)	68-19-9	0.014%
Molybdenum (Sodium Molybdate)	7631-95-0	< 0.001%
Iodine (Potassium Iodide)	7681-11-0	0.001%
Vitamin B2 (Riboflavin)	83-88-5	0.016%
Niacinamide	98-92-0	0.213%
Manganese Chloride	7773-01-5	0.06%
Vitamin A	127-47-9	0.192%
Vitamin C (Ascorbic Acid)	50-81-7	1.2%
Vitamin D2	50-14-6	0.04%
Edetic Acid	60-00-4	0.01%
Sucrose	57-50-1	33.33%
Citric Acid (Anhydrous)	77-92-9	0.233%
Glycerine	56-81-5	1.333%
Inactive Ingredients	Not applicable	Remainder

4. FIRST AID MEASURES

Eye Contact In case of contact with eyes, rinse immediately with plenty of water for 15 mintues and seek medical advice

Skin Contact Wash off with soap and plenty of water

Inhalation Artificial respiration and/or oxygen may be necessary

Ingestion Immediate medical attention is not required

5. FIRE-FIGHTING MEASURES

Flammable Properties Combustible liquid.

Extinguishing Media

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Unsuitable Extinguishing Media Do NOT use water jet.

Fire Fighting Evacuate area and fight fire from a safe distance

Hazardous Combustion Products Hazardous Combustion Products

Protective Equipment and Precautions for Firefighters In the event of fire, wear self-contained breathing apparatus and special protective equipment for fire fighters.

Other Information Flammability Class (OSHA): II

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions Local authorities should be advised if a significant spill cannot be contained

Methods for Containment Not available

Methods for Cleaning up Take up mechanically and collect in suitable container for disposal

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practices

Storage Keep container tightly closed

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to available public information for specific member state Occupational Exposure Limits.

Glycerine
Exposure Guideline: 10 mcg/m^3 (ACGIH)

Ethanol
Exposure Guideline: 1900 mg/m^3

Sucrose
Exposure Guideline: 10 mg/m^3 (ACGIH)

Chromic Chloride
Exposure Guideline: 0.5 mg/m^3 (ACGIH)

Engineering Controls No special precautions required.

Personal Protective Equipment

Eye/face Protection Avoid contact with skin and eyes.

Skin Protection For prolonged or repeated exposure use protective gloves. No special protective clothing required under typical conditions of use.

Respiratory Protection No personal respiratory protective equipment normally required.

General Hygiene Considerations When using, do not eat, drink or smoke

Other Limit access to only personnel trained in the safe handling of this material

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid	**Physical State**	Liquid
Color	Clear	**Odor**	Not available
Odor Threshold	Not available		
pH	Not available		

Specific Gravity	Not available	**Water Solubility**	Not available
Solubility	Not available	**Evaporation Rate**	Not available
Partition Coefficient (n-octanol/water)	Not available	**Vapor Pressure**	Not applicable
Boiling Point	Not available	**Autoignition Temperature**	Not applicable
Flash Point	127°F	**Method**	None
Melting Point	Not applicable		
Flammability Limits in Air	**Upper** Not applicable	**Lower** Not applicable	
Upper Not applicable	**Lower** Not applicable		

10. STABILITY AND REACTIVITY

Chemical Stability Stable at room temperature.

Conditions to Avoid No data available

Materials to Avoid No materials to be especially mentioned.

Hazardous Decomposition Products None under normal use.

Possibility of Hazardous Reactions None under normal use.

11. TOXICOLOGICAL INFORMATION

The following effects are based on the Active Pharmaceutical Ingredient.

Inactive Ingredients

Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Glycerine

LD50 Oral	12.6 gm/kg rats, 4090 mg/kg mice
Acute Dermal Irritation	Mild irritation effect in rabbits.
Primary Eye Irritation	Irritating to rabbit eyes.
Sensitization	Not available

Biotin

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Vitamin B6 (Pyridoxine Hydrochloride)

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Vitamin E (acetate)

LD50 Oral	Not applicable
Acute Dermal Irritation	Not applicable
Primary Eye Irritation	Not applicable
Sensitization	Not applicable

Vitamin B12 (Cyanocobalamin)

LD50 Oral	Not applicable
Acute Dermal Irritation	Not applicable
Primary Eye Irritation	Not applicable
Sensitization	Not applicable

Molybdenum (Sodium Molybdate)

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Iodine (Potassium Iodide)

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Ethanol

LD50 Oral	3450 mg/kg mice 7060 mg/kg rats
Acute Dermal Irritation	Moderate irritation effect in rabbits.
Primary Eye Irritation	Severely irritating to rabbit eyes.
Sensitization	Not applicable

Vitamin B2 (Riboflavin)

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Vitamin A

LD50 Oral	Not applicable
Acute Dermal Irritation	Not applicable
Primary Eye Irritation	Not applicable
Sensitization	Not applicable

Vitamin C (Ascorbic Acid)

LD50 Oral	>11 gm/kg rats
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

D-Panthenol

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Thiamine Hydrochloride

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Niacinamide

LD50 Oral	3500 mg/kg rats 2500 mg/kg mice
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Manganese Chloride

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Edetic Acid

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Sucrose

LD50 Oral	Rat 29700mg/kg
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Sodium Benzoate

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Ferrous Gluconate

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Vitamin D2

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Citric Acid (Anhydrous)

LD50 Oral	Rat 3gm/kg
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Zinc Gluconate

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Chromic Chloride

LD50 Oral	No data available
Acute Dermal Irritation	No data available
Primary Eye Irritation	No data available
Sensitization	No data available

Multiple Dose Toxicity

Inactive Ingredients

No Toxicologic Effect	No data available
Dose/Species/Study Length:	

Glycerine

No Toxicologic Effect	In a 180-day study in rats, 5% in drinking water caused calcification in the renal tubules. A
Dose/Species/Study Length:	further drinking water study in rats resulted in increased urinary levels of oxalic acid.

Biotin

No Toxicologic Effect	No data available
Dose/Species/Study Length:	

Vitamin B6 (Pyridoxine Hydrochloride)

No Toxicologic Effect	No data available
Dose/Species/Study Length:	

Vitamin E (acetate)

No Toxicologic Effect	Not applicable
Dose/Species/Study Length:	

Vitamin B12 (Cyanocobalamin)

No Toxicologic Effect	Not applicable
Dose/Species/Study Length:	

Molybdenum (Sodium Molybdate)

No Toxicologic Effect	No data available
Dose/Species/Study Length:	

Iodine (Potassium Iodide)

No Toxicologic Effect	No data available
Dose/Species/Study Length:	

Ethanol

No Toxicologic Effect	Repeated contact can dry the skin with cracking, peeling, and itching. Repeated high exposure
Dose/Species/Study Length:	may affect the liver and nervous system.

Vitamin B2 (Riboflavin)

No Toxicologic Effect	No data available
Dose/Species/Study Length:	

Vitamin A

No Toxicologic Effect Dose/Species/Study Length: Not applicable

Vitamin C (Ascorbic Acid)
No Toxicologic Effect Dose/Species/Study Length: No data available

D-Panthenol
No Toxicologic Effect Dose/Species/Study Length: No data available

Thiamine Hydrochloride
No Toxicologic Effect Dose/Species/Study Length: No data available

Niacinamide
No Toxicologic Effect Dose/Species/Study Length: No data available

Manganese Chloride
No Toxicologic Effect Dose/Species/Study Length: No data available

Edetic Acid
No Toxicologic Effect Dose/Species/Study Length: No data available

Sucrose
No Toxicologic Effect Dose/Species/Study Length: No data available

Sodium Benzoate
No Toxicologic Effect Dose/Species/Study Length: No data available

Ferrous Gluconate
No Toxicologic Effect Dose/Species/Study Length: No data available

Vitamin D2
No Toxicologic Effect Dose/Species/Study Length: No data available

Citric Acid (Anhydrous)
No Toxicologic Effect Dose/Species/Study Length: No data available

Zinc Gluconate
No Toxicologic Effect Dose/Species/Study Length: No data available

Chromic Chloride
No Toxicologic Effect Dose/Species/Study Length: No data available

Maximum Tolerated Dose (MTD), Oral

Inactive Ingredients

Carcinogenicity	No data available
Genetic Toxicity	Negative in a battery of genotoxicity tests.
Reproductive Toxicity	No data available
Developmental Toxicity	Animal studies did not show statistically significant developmental toxicological effects

Glycerine

Carcinogenicity	No data available
Genetic Toxicity	Non-mutagenic in Ames test; non-clastogenic in chromosomal aberrations assay.
Reproductive Toxicity	Studies in rats were found to have no effect on fertility.
Developmental Toxicity	No teratogenic effects were observed in mice, rats and rabbits given large oral doses of >1 g/kg/day during pregnancy. In a further study, increased rates of embryonic and fetal death were seen when rats were dosed IV at 4 mg/kg; this was not seen in rabbit or mice studies.

Biotin

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Vitamin B6 (Pyridoxine Hydrochloride)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Vitamin E (acetate)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Vitamin B12 (Cyanocobalamin)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Molybdenum (Sodium Molybdate)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Iodine (Potassium Iodide)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Ethanol

Carcinogenicity	No data available
Genetic Toxicity	May cause genetic changes.
Reproductive Toxicity	See Developmental Toxicity.

Developmental Toxicity	Repeated exposure may cause spontaneous abortions, as well as birth defects and other developmental problems (fetal alcohol syndrome).

Vitamin B2 (Riboflavin)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Vitamin A

Carcinogenicity	No data available
Genetic Toxicity	Not applicable
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Vitamin C (Ascorbic Acid)

Carcinogenicity	Under the conditions of the National Toxicology Program (NTP) studies, there was no evidence of Carcinogenicity activity in male or female rats or mice.
Genetic Toxicity	No studies to assess the mutagenic potential have been performed.
Reproductive Toxicity	No data available
Developmental Toxicity	Studies to evaluate the teratogenic potential have not been performed.

D-Panthenol

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Thiamine Hydrochloride

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Niacinamide

Carcinogenicity	No data available
Genetic Toxicity	AMES Test :Negative- Nonmutagenic
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Manganese Chloride

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Edetic Acid

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Sucrose

Carcinogenicity	No data available
Genetic Toxicity	No data available

Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Sodium Benzoate

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Ferrous Gluconate

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Vitamin D2

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Citric Acid (Anhydrous)

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Zinc Gluconate

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Chromic Chloride

Carcinogenicity	No data available
Genetic Toxicity	No data available
Reproductive Toxicity	No data available
Developmental Toxicity	No data available

Inactive Ingredients

Target Organ(s) of Toxicity	No data available

Glycerine

Target Organ(s) of Toxicity	No data available

Biotin

Target Organ(s) of Toxicity	No data available

Vitamin B6 (Pyridoxine Hydrochloride)

Target Organ(s) of Toxicity	No data available

Vitamin E (acetate)

Target Organ(s) of Toxicity	No data available

Vitamin B12 (Cyanocobalamin)
Target Organ(s) of Toxicity No data available

Molybdenum (Sodium Molybdate)
Target Organ(s) of Toxicity No data available

Iodine (Potassium Iodide)
Target Organ(s) of Toxicity No data available

Ethanol
Target Organ(s) of Toxicity No data available

Vitamin B2 (Riboflavin)
Target Organ(s) of Toxicity No data available

Vitamin A
Target Organ(s) of Toxicity No data available

Vitamin C (Ascorbic Acid)
Target Organ(s) of Toxicity No data available

D-Panthenol
Target Organ(s) of Toxicity No data available

Thiamine Hydrochloride
Target Organ(s) of Toxicity No data available

Niacinamide
Target Organ(s) of Toxicity No data available

Manganese Chloride
Target Organ(s) of Toxicity No data available

Edetic Acid
Target Organ(s) of Toxicity No data available

Sucrose
Target Organ(s) of Toxicity No data available

Sodium Benzoate
Target Organ(s) of Toxicity No data available

Ferrous Gluconate
Target Organ(s) of Toxicity No data available

Vitamin D2
Target Organ(s) of Toxicity No data available

Citric Acid (Anhydrous)
Target Organ(s) of Toxicity No data available

Zinc Gluconate
Target Organ(s) of Toxicity No data available

Chromic Chloride

Target Organ(s) of Toxicity No data available

12. ECOLOGICAL INFORMATION

The following effects are based on the Active Pharmaceutical Ingredient.

Chemical Fate Information Not available

Ecotoxicity Not available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

14. TRANSPORT INFORMATION

Transport Information This material is regulated for transportation as a hazardous material/dangerous goods.

Proper Shipping Name: Ethyl alcohol solution
Identification Number: UN 1170
Hazard Class: 3
Packing Group: III
Flashpoint: 52.78 °C (127 °F)

Exceptions: For small quantities packed in combination packaging [limited to inner packaging <= 5.0 L (1.3 gal) and outer packaging <= 30 kg (66 lb.) gross weight], the following will apply. In addition, see "excepted quantity" provisions if applicable.

Note: If your commodity meets the definition of a limited quantity and is packaged for retail sale, it may be considered a **Consumer Commodity** and excepted from additional requirements as applicable.

U.S. Department of Transport (DOT)
- **Proper Shipping Name** Consumer Commodity
- **Hazard Class** ORM-D

International Air Transport Association (IATA)
- **Proper Shipping Name** Consumer Commodity
- **Hazard Class** 9
- **UN-No** ID 8000

International Maritime Dangerous Goods (IMDG)
- **Proper Shipping Name** Ethyl alcohol solution, Ltd. Qty.
- **Hazard Class** 3
- **UN-No** UN 1170
- **Packing Group** III
- **Flashpoint:** 52.78 °C (127 °F)

Transport of Dangerous Goods by Road (ADR)
- **Proper Shipping Name** Ethyl alcohol solution, Ltd. Qty.

Hazard Class	3
UN-No	UN 1170
Packing Group	III

15. REGULATORY INFORMATION

USA

Federal Regulations

OSHA Regulatory Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Common Name	CAS-No	Concentration
Zinc Gluconate	4468-02-4	<1%
Chromic Chloride	10025-73-7	<1%

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

This product does not contain any HAPs.

State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals: Retinol/Retinyl esters, when in daily doses in excess of 10,000 IU or 3,000 retional equivalents. Listed on Proposition 65 as Developmental.

Canada
Not Determined

WHMIS Hazard Class
Non-controlled

European Union
Not Determined

16. OTHER INFORMATION

Prepared By	Wyeth Department of Environment, Health & Safety
Format	This MSDS was prepared in accordance with ANSI Z400.1-2004.
List of References	See Patient Package Insert for more information.
Revision Summary	Changes to Section 14

Disclaimer:

The information, data, recommendations, and suggestions appearing in this material safety data sheet (MSDS) and/or in materials regarding our active pharmaceutical ingredients (APIs) or products are based upon tests and data believed to be reliable as of the date of publication. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS MADE WITH REGARD TO THE INFORMATION PROVIDED IN THE MSDS, REGARDING THE API, OR THE PRODUCT TO WHICH THE INFORMATION PERTAINS. Accordingly, Wyeth will not be responsible for any damages resulting from use of, or reliance upon, this information as conditions of use are beyond our control. Users are responsible for assuring the safety of their workers and safe operating conditions, and for determining whether the API or product is suitable for their particular purposes. Users shall assume all risks of their use, handling, and disposal of the API and/or product in accordance with all appropriate and applicable regulations. This information relates only to the API or product designated herein, and does not relate to its use in combination with any other API, material, product, or process. No permission is granted for the use of any API or product in a manner that might infringe on existing patents.

End of MSDS