



Material Safety Data Sheet

Section I: Chemical Product and Company Identification

Common Name/ Trade Name	Barsol A-3202	Code	60047060; 96021010
Supplier	Barton Solvents, Inc. 1920 N.E. Broadway, P.O. Box 221 Des Moines, IA 50301	CAS#	Mixture
Synonym	Denatured Ethyl Alcohol	Rev. Date	08-1983; 11-1985; 12-31-1987; 10-1988; 05-05-1994; 02-26-2001; 08-19-2003
Chemical Name	Not applicable.	In case of Emergency	CHEMTREC (800) 424-9300
Chemical Family	(Solvent.)		

Section II: First Aid Measures

Eye Contact	In case of contact with eyes, rinse immediately with plenty of water. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Inhalation	Allow the victim to rest in a well ventilated area. Oxygen may be administered if breathing is difficult. Seek medical attention.
Ingestion	Induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Lower the head so that the vomit will not reenter the mouth and throat. Seek immediate medical attention. DO NOT ingest.

Section III: Composition and Information on Ingredients

Name	CAS #	% by Volume	TLV/PEL	LC ₅₀ /LD ₅₀
Methyl alcohol	67-56-1	4.24	TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) TWA: 200 STEL: 250 (ppm) from OSHA (PEL)	ORAL (LD50): Acute: 6200 mg/kg [Rat]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 64000 ppm 4 hour(s) [Rat].
Water	7732-18-5	6.96	Not available.	Not available.
Ethanol	64-17-5	84.88	TWA: 1000 (ppm) from ACGIH (TLV) TWA: 1000 (ppm) from OSHA (PEL)	ORAL (LD50): Acute: 7060 mg/kg [Rat]. VAPOR (LC50): Acute: 8000 ppm 4 hour(s) [Rat].
Methyl isobutyl ketone	108-10-1	1.9	TWA: 50 (ppm) from OSHA (PEL) TWA: 50 (ppm) from ACGIH (TLV)	ORAL (LD50): Acute: 1600 mg/kg [Guinea pig]. 2671 mg/kg [Mouse]. 4600 mg/kg [Rat].
Ethyl acetate	141-78-6	1.18	TWA: 400 (ppm) from ACGIH (TLV) TWA: 400 (ppm) from OSHA (PEL)	ORAL (LD50): Acute: 5620 mg/kg [Rat]. VAPOR (LC50): Acute: 19596 ppm 4 hour(s) [Rat].
Light Aliphatic Solvent Naphtha (H)	64742-89-8	0.84	TWA: 400 (ppm) from ACGIH (TLV) TWA: 400 (ppm) from OSHA (PEL)	Not available.

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Section IV: Hazards Identification

Potential Acute Health Effects	Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant). Non-sensitizer for skin. Severe over-exposure can result in death. POISON Cannot be made non-poisonous.
Potential Chronic Health Effects	Hazardous in case of skin contact (permeator), of ingestion. CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Methyl alcohol]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Methyl isobutyl ketone]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Ethyl acetate]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Light Aliphatic Solvent Naphtha (H)]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: PROVEN [Methyl alcohol] The substance is toxic to kidneys, the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section V: Fire and Explosion Data

Flammability of the Product	Flammable.
Auto-Ignition Temperature	The lowest known value is 422°C (791.6°F) (Ethanol).
Flash Points	The lowest known value is CLOSED CUP: -4.4°C (24.1°F). (Tagliabue.). OPEN CUP: -3°C (26.6°F). (Cleveland). (Ethyl acetate)
Flammable Limits	The greatest known range is LOWER: 6% UPPER: 36.5% (Methyl alcohol)
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	Highly flammable in presence of combustible materials. Flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of oxidizing materials. Non-flammable in presence of reducing materials.
Fire Fighting Media and Instructions	Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemicals, CO ₂ , alcohol foam or water spray. LARGE FIRE: Use water spray or fog.

Section VI: Accidental Release Measures

Small Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Large Spill	Poisonous flammable liquid, insoluble or very slightly soluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section VII: Handling and Storage

Precautions	Keep locked up. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.
Storage	Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

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Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	Splash goggles. Lab coat. Gloves. Wear appropriate respirator when ventilation is inadequate.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section IX. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Alcohol like.
		Color	Clear.
Molecular Weight	Not applicable.		
pH (1% soln/water)	Neutral.		
Boiling Point	The lowest known value is 64.5°C (148.1°F) (Methyl alcohol). Weighted average: 80.11°C (176.2°F)		
Melting Point	May start to solidify at 0°C (32°F) based on data for: Water. Weighted average: -104.45°C (-156°F)		
Solubility	Easily soluble in methanol, diethyl ether, acetone. Insoluble in cold water, hot water, n-octanol.		
Specific Gravity	Weighted average: 0.8 (Water = 1)		
Vapor Pressure	The highest known value is 97.68 mm of Hg (@ 20°C) (Methyl alcohol). Weighted average: 43.36 mm of Hg (@ 20°C)		
Vapor Density	The highest known value is 3.45 (Air = 1) (Methyl isobutyl ketone). Weighted average: 1.58 (Air = 1)		
Volatility	100% (v/v).		
Viscosity	The highest known value is 10 cP (Ethanol)		
Evaporation rate	The highest known value is 3.5 (Methyl alcohol). Weighted average: 1.78 compared to Butyl acetate.		

Section X. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	No additional remark.
Incompatibility with various substances	Reactive with oxidizing agents, acids, alkalis. Non-reactive with organic materials, metals.
Corrosivity	Not considered to be corrosive for metals and glass according to our database.

Section XI. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Ingestion. Inhalation.
Toxicity to Animals	WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 1600 mg/kg [Guinea pig]. (Methyl isobutyl ketone). Acute dermal toxicity (LD50): 15800 mg/kg [Rabbit.]. (Methyl alcohol). Acute toxicity of the vapor (LC50): 8000 ppm 4 hour(s) [Rat.]. (Ethanol).

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Chronic Effects on Humans	<p>CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Methyl alcohol]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Methyl isobutyl ketone]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Ethyl acetate]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Light Aliphatic Solvent Naphtha (H)].</p> <p>DEVELOPMENTAL TOXICITY: PROVEN [Methyl alcohol] The substance is toxic to kidneys, the reproductive system.</p>
Other Toxic Effects on Humans	<p>Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant). Slightly hazardous in case of ingestion, of inhalation. Non-sensitizer for skin.</p>

Section XII. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.

Section XIII. Disposal Considerations

Waste Disposal	Recycle, if possible. Consult your local or regional authorities.
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Section XIV. Transport Information

DOT Classification	DOT CLASS 3: Flammable liquid.
PIN	Shipping Name: Ethanol Solution UNNA:UN1170, PG: II
Special Provisions for Transport	No additional remark.
DOT (Pictograms)	

Section XV. Other Regulatory Information and Pictograms

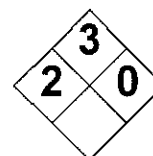
Federal and State Regulations	<p>SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 313 toxic chemical notification and release reporting: Methyl alcohol; Methyl isobutyl ketone; CERCLA hazardous substances: Methyl alcohol; Methyl isobutyl ketone; Ethyl acetate; All components of this product are listed on the TSCA inventory.</p>
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HMIS (U.S.A.)

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Reactivity	0
Personal Protection	J

National Fire
Protection
Association (U.S.A.)

Health



Fire Hazard

Reactivity

Specific hazard

Section XVI: Other Information**References** Not available.**Other Special Considerations** Format change 02-26-2001; Update 08-19-03**Validated by Barton Solvents, Inc. on 8/25/2003.****Verified by Barton Solvents, Inc..****Printed 8/25/2003.****Daytime Phone (515)-265-7998****Notice to Reader**

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