

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: CDA 20, 200 Proof with Heptanes
This MSDS is valid for all grades and catalog #'s

Synonyms: Denatured Alcohol; Denatured Ethanol; Completely Denatured Alcohol

Manufacturer: Pharmco Products Inc.
58 Vale Road
Brookfield, Connecticut 06804,

USA

Phone (203) 740-3471
Fax (203) 740-3481

Emergency Contact:
CHEMTREC 1-800-424-9300

SECTION II

COMPOSITION /INFORMATION ON INGREDIENTS

% vol.	Material	CAS	Exposure Limits
98%	Ethanol	64-17-5	1000ppm TWA
2.0%	HEPTANES	142-82-5	

SECTION III

HAZARDS IDENTIFICATION

Carcinogen Status: Established uses of denatured ethanol are not considered to pose a significant cancer hazard.

Routes of Exposure:

Swallowing: May cause dizziness, faintness, drowsiness decreased awareness or responsiveness, nausea, vomiting, staggering gait, lack of coordination, blindness, coma and death.

Skin Absorption: Prolonged or widespread contact may result in the absorption of potentially harmful amounts.

Inhalation: High vapor concentration may cause burning sensation in nose and throat and stinging and watering in the eyes.

At concentrations which cause irritation, dizziness, faintness, drowsiness, nausea and vomiting may also occur.

Skin Contact: Prolonged or repeated contact may cause defatting and drying of the skin.

Eye Contact: May cause irritation including stinging, tearing, and redness

Effects of Repeated Overexposure: Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis. Overexposure to methanol may cause eye damage and liver or kidney injury.

Other Health Hazards: Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute fetal alcohol syndrome.

Medical Conditions Aggravated by Overexposure:

Repeated exposure to ethanol may aggravate liver injury produced from other causes. Skin contact may aggravate dermatitis.

SECTION IV FIRST AID

Obtain medical attention for all cases of over-exposure.

Swallowing: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention.

Skin: Wash skin with soap and water for at least 15 minutes

Inhalation: Remove to fresh air; Give artificial respiration if not breathing; If breathing is difficult oxygen may be given by qualified personnel; Obtain medical assistance if discomfort persists.

Eye Contact: Flush eyes with water for at least 15 minutes. Obtain medical assistance.

Note to Physician: Symptoms vary with alcohol level of the blood.

Mild alcohol intoxication occurs at blood levels between 0.5-.15%. Approximately 25% of individuals show signs of intoxication at these levels. Above .15% the person is definitely under the influence of ethanol; 50-95% of individuals are clinically intoxicated at these levels. Severe poisoning occurs when the blood is ethanol level is 0.3- 0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids.

SECTION V FIRE FIGHTING MEASURES

Fire/Explosive Properties

Flash Point: for 200 proof ethanol:

58F (14C) Tag Closed Cup

70F (21C) Tag Open Cup

Flammable Limits in Air (% by volume):

3.3%(ethanol) - 19.0 (ethanol)

Flammability Classification: 3 (NFPA)

1993 Emergency Response Guidebook: Guide 26

1996 North American Emergency Response

Guidebook:

Guide 127

Extinguishing Media: Apply alcohol-type or all-purpose foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

Special Fire Fighting Procedures: Use water spray to cool fire-exposed containers and structures; Use water spray to disperse vapors - re-ignition is possible; Use self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards:

- ♦ Vapors may travel to source of ignition and flash back.
- ♦ Vapors may settle in low or confined spaces.
- ♦ May produce a floating fire hazard.
- ♦ Static ignition hazard can result from handling and use.

SECTION VI

SPILL/ACCIDENTAL RELEASE MEASURES

Small spills can be flushed with large amounts of water.

Large spills: Eliminate all ignition sources; ground all equipment; do not walk through spill; stop spill if possible; prevent entry into sewers, confined spaces, etc.; use a vapor suppressing foam to reduce vapors; absorb spill with non-combustible matter and transfer to containers; use non-sparking tools to collect absorbed material. Refer to section 11 for disposal information.

SECTION VII HANDLING AND STORAGE

- ♦ Flammable material - keep away from heat, sparks, and flame; sudden releases of hot organic vapors or mists from process equipment operating at elevated temperature may result in ignitions without the presence of obvious ignition sources.
 - ♦ Avoid contact with eyes.
 - ♦ Keep container closed.
 - ♦ Use with adequate ventilation.
 - ♦ Ground container when transferring product.
 - ♦ Vapors may collect in containers; treat empty containers as hazardous.
 - ♦ Wash thoroughly after handling
 - ♦ Vapors may settle in low or confined areas
 - ♦ Danger - may cause blindness or death if swallowed
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SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Special, local ventilation is needed where vapors escape to the workplace air
Respiratory Protection: Use self-contained breathing apparatus in high vapor concentration
Personal Protective Equipment: gloves, lab coat or uniform, safety glasses, eye wash, safety shower

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

For 200 Proof Ethanol:
Appearance: clear, colorless liquid
Odor: characteristic
Vapor pressure @ 20C: 44.6mmHg
Vapor density: 1.6 for pure 200 ethanol (air =1)
Boiling point @ 760mm Hg: 78.3C for pure 200 ethanol
Freezing Point: <-90C
Solubility in Water:
100% @ 20C for pure 200 proof ethanol
Specific Gravity : @ 20C .7906
Density @ (60F) 6.61 lbs/gal
Evaporation Rate: (butyl acetate = 1) 3.3 for pure 200 ethanol
Percent Volatiles: 100%

SECTION X STABILITY/REACTIVITY INFORMATION

Stability: Stable
Conditions to avoid: None known
Incompatibility/Materials to avoid: strong oxidizing agents; strong inorganic acids
Hazardous Combustion/Decomposition Products: Carbon monoxide and/or carbon dioxide
Hazardous Polymerization: Will not occur

SECTION XI DISPOSAL CONSIDERATIONS

Vapors may collect in empty containers. Treat empty containers as hazardous.
Dispose of spill-clean up and other wastes in accordance with Federal, State, and local regulations.

SECTION XII TRANSPORTATION INFORMATION

Proper Shipping Name: Alcohol, nos
Hazard Class: 3
UN Number: 1987
IMO Information: Alcohols, NOS
Label of Class: 3
Packing Group II
Intermediate flashpoint group

SECTION XIII REGULATORY INFORMATION

Federal EPA

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in CFR. Components present in this product at a level which could require reporting under this statute are:

Chemical	CAS Number	Upper Bound Conc. %
Acetaldehyde	75-07-0	.0010

Superfund Amendments and Reauthorization Act of 1986

(SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312). Components present in this product at a level which could require reporting under this statute are: none.

Superfund Amendments and Reauthorization Act of 1986

(SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

Rubber Solvent upper bound conc. 1.0%

Toxic Substances Control Act (TSCA) Status:

The ingredients of this product are on the TSCA inventory.

State Right to Know

California Proposition 65: This product contains trace levels of acetaldehyde known to the State of California to cause cancer.
Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Components present which could require reporting:

Extraordinarily Hazardous (=> 0.0001%): Acetaldehyde (CAS 75-07-0) upper bound conc. .0010%
Hazardous (=>1%): Ethanol (CAS 64-17-5) upper bound conc. 95.2%

Pennsylvania: Hazardous substances must be identified.

Hazardous (=>1%): Ethanol (CAS 64-17-5) upper bound conc. 74.7%

California SCAQMD Rule 443.1 (VOC's)

*A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides, or carbonates, ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, (FC-23), (CFC-113), (CFC-12), (CFC-11), (CFC-22), (CFC-114) and (CFC-115).
VOC 790g/l 44.6mmHg for pure 200 proof ethanol*

The information contained herein is based on data considered to be accurate. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use of the product.



**Product Information (203) 740-3471 /
Emergency Assistance CHEMTREC 1-
800-424-9300 or 202-483-7616**

MATERIAL SAFETY DATA SHEETS

Part Number/Trade Name: HEPTANES, 25% min n-Heptane

General Information

Company's Name: PHARMCO PRODUCTS, INC.
Company's Street: 58 VALE RD.
Company's City: BROOKFIELD
Company's State: CT
Company's Zip Code: 06804
Company's Emerg Ph #: (203) 740-3471
Company's Info Ph #: (203) 740-3471
Date MSDS Revised: PS 01/02/02

Safety Data Review Date: 01/02/02
Preparer's Company: PHARMCO PRODUCTS, INC.
Preparer's St Or P. O. Box: 58 VALE RD.
Preparer's City: BROOKFIELD
Preparer's State: CT
Preparer's Zip Code: 06804

Ingredients/Identity Information

Ingredient: Heptanes all isomers
(n-heptane 25.0% min.)

Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: MI7700000

CAS Number: 142-82-5
OSHA PEL: 500 PPM
ACGIH TLV: 400 PPM/500STEL;9394
Other Recommended Limit: NONE
RECOMMENDED

Physical/Chemical Characteristics

Appearance And Odor: COLORLESS LIQUID.
Boiling Range: 92.3-100C
Melting Point: -132F, -91C
Vapor Pressure (MM Hg/70 F): 40
Vapor Density (Air=1): 3.4
Specific Gravity: 0.69-0.72

Decomposition Temperature: UNKNOWN
Evaporation Rate And Ref: 2.8 (BUTYL ACETATE = 1)
Solubility In Water: NEGLIGIBLE; 0.005%
Percent Volatiles By Volume: 100
Autoignition Temperature: Not Available

Fire and Explosion Hazard Data

Flash Point: 25.0F, -4C
Flash Point Method: CC
Lower Explosive Limit: 1.0
Upper Explosive Limit: 6.7
Extinguishing Media: USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL.
USE WATER WITH CAUTION. HEPTANE CAN FLOAT ON WATER AND REIGNITE.
Special Fire Fighting Proc: WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.
Unusual Fire And Expl Hazrds: COMBUSTION OR HEAT OF FIRE MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS AND VAPORS. VAPORS HEAVIER THAN AIR. CAN TRAVEL A LONG DISTANCE AND FLASHBACK.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HIGH HEAT, SPARKS,
OPEN FLAMES AND OTHER
SOURCES OF IGNITION
Materials To Avoid: STRONG OXIDIZING
AGENTS, ACIDS, LIQUID CHLORINE, RED

PHOSPHOROUS.
Hazardous Decomp Products: CARBON
MONOXIDE, CARBON DIOXIDE,
INCOMPLETELY
BURNED CARBON PRODUCTS.
Hazardous Poly Occur: NO

Health Hazard Data

Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: INHAL: ABOVE 5000PPM MAY CAUSE ASPHYXIATION,
MAY CAUSE IRRITATION. SKIN ABSORPTION MAY OCCUR. PROLONGED EXPOSURE MAY CAUSE
DEFATTING. EYES: MAY CAUSE IRRITATION. INGEST: GI IRRITANT. MAY CAUSE CNS
DEPRESSION. VOMITING AFTER INGEST MAY CAUSE DEATH.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NONE OF THE INGREDIENTS IN THIS PRODUCT IS
LISTED BY NTP, IARC OR OSHA AS A CARCINOGEN.
HEADACHE, GIDDINESS, NARCOSIS, GASOLINE-LIKE TASTE IN MOUTH. INGEST: ABDOMINAL
PAIN, NAUSEA, VOMITING, DIARRHEA. ASPIRATION OF C6-8 ALIPHATIC HYDROCARBONS HAS
CAUSED IMMEDIATE DEATH DUE TO LUNG AND HEART FAILURE.
Med Cond Aggravated By Exp: INDIVIDUALS WITH A HISTORY OF SKIN AND
RESPIRATORY DISORDERS MAY BE AT INCREASED RISK FROM EXPOSURE.
Emergency/First Aid Proc: EYES/SKIN: FLUSH WITH PLENTY OF WATER FOR AT
LEAST 15 MINUTES. IF IRRITATION PERSISTS, SEE DOCTOR. INHALATION: REMOVE
DRINK 1 OR 2 GLASSES OF MILK OR WATER. DO NOT INDUCE VOMITING. SEE DOCTOR
IMMEDIATELY.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: REMOVE PERSONNEL. ELIMINATE IGNITION
SOURCES. VENTILATE AREA. WEAR PROTECTIVE CLOTHING AND EQUIPMENT. ABSORB IN
INERT MATERIAL AND PLACE IN APPROPRIATE DISPOSAL CONTAINER AND COVER.
Neutralizing Agent: NONE
Waste Disposal Method: CONTACT YOUR LOCAL ENVIRONMENTAL OFFICER. DISPOSE
OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
MANUFACTURER RECOMMENDS INCINERATION. EPA CODE D001.
Precautions-Handling/Storing: STORE IN COOL, DRY, WELL VENTILATED AREA.
PROTECT FROM PHYSICAL DAMAGE, HEAT, IGNITION SOURCES AND INCOMPATIBLE
MATERIALS. KEEP CONTAINERS CLOSED.
Other Precautions: MATERIAL IS EXTREMELY FLAMMABLE. VAPORS MAY IGNITE
EXPLOSIVELY. PREVENT BUILDUP OF VAPORS. EMPTY CONTAINERS RETAIN RESIDUE,
TREAT AS IF THEY WERE FULL. AVOID EYE AND SKIN CONTACT. DO NOT BREATHE
VAPORS. GROUND AND BOND CONTAINERS.

Control Measures

Respiratory Protection: NIOSH/MSHA-APPROVED RESPIRATOR OR SCBA AS
APPROPRIATE FOR EXPOSURE OF CONCERN.
Ventilation: MECHANICAL (GENERAL) VENTILATION OR LOCAL EXHAUST VENTILATION
TO KEEP EXPOSURE LEVELS BELOW PEL. USE EXPLOSION-PROOF EQ.
Protective Gloves: RUBBER GLOVES.
Eye Protection: CHEMICAL SAFETY GOGGLES.
Other Protective Equipment: PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE

EXPOSURE FROM PROLONGED OR REPEATED CONTACT. EYE BATH AND SAFETY SHOWER.
Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING.
LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.
Suppl. Safety & Health Data: NONE.

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Transportation Data
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Trans Data Review Date: 94130
DOT PSN Code: HAD
DOT Proper Shipping Name: HEPTANES
DOT Class: 3
DOT ID Number: UN1206
DOT Pack Group: II
DOT Label: FLAMMABLE LIQUID
IMO PSN Code: HXF
IMO Proper Shipping Name: HEPTANES
IMO Regulations Page Number: 3235
IMO UN Number: 1206
IMO UN Class: 3.2
IMO Subsidiary Risk Label: -
IATA PSN Code: NDD

IATA UN ID Number: 1206
IATA Proper Shipping Name: HEPTANES
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
AFI PSN Code: NDD
AFI Prop. Shipping Name: HEPTANES
AFI Class: 3
AFI ID Number: UN1206
AFI Pack Group: II
AFI Label: FLAMMABLE LIQUID
AFI Basic Pac Ref: 7-7
MMAC Code: NR
Additional Trans Data: NONE

NOT INDUCE VOMITING. SEE DOCTOR IMMEDIATELY.

Protect Eye: Y Protect Skin: Y

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Disposal Data
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Refer to applicable regional, state and federal codes.
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Label Data
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Common Name: HEPTANE
Signal Word: WARNING!
Acute Health Hazard-Moderate: X
Contact Hazard-Slight: X
Fire Hazard-Moderate: X
Reactivity Hazard-None: X
Special Hazard Precautions: INHAL:ABOVE
5000PPM MAY CAUSE ASPHYXIATION,
MAY CAUSE IRRITATION.SKIN ABSORPTION
MAY OCCUR.PROLONGED EXPOSURE MAY
CAUSE
DEFATTING.EYES:MAY CAUSE
IRRITATION.INGEST:GI IRRITANT.MAY
CAUSE CNS
FLUSH WITH PLENTY OF WATER FOR AT
LEAST 15 MINUTES. IF IRRITATION
PERSISTS,
SEE DOCTOR. INHALATION: REMOVE VICTIM
TO FRESH AIR. GIVE OXYGEN/CPR IF
NEEDED. SEE DOCTOR. INGESTION: DRINK 1
OR 2 GLASSES OF MILK OR WATER . DO