



# SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** CDA 12-A (n-heptane)  
**PRODUCT SYNONYM(s):** Completely Denatured Alcohol (CDA), Denatured Ethanol Mixture  
**CAS NUMBER:**  
**RECOMMENDED USE:** Fuel Additive, Solvent, Food Additive, Cosmetics, Beverages  
**SUPPLIER/MANUFACTURER'S NAME:** Carbon Chemistry Ltd.  
**ADDRESS:** 34501 E Quincy Ave Bldg 28, Watkins, Colorado 80137  
**BUSINESS PHONE:** +1 (888) 446-8421  
**EMERGENCY PHONE:** 24 HR. EMERGENCY TELEPHONE NUMBERS  
CHEMTREC: CCN832309 (800) 424-9300  
**DATE OF PREPARATION:** May 15, 2018  
**DATE OF LAST REVISION:** New

## SECTION 2 - HAZARDS IDENTIFICATION

### Classification of the mixture

This product does meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 and WHMIS 2015.

### Component(s) Contributing to Classification(s)

Ethanol, N-heptane

### GHS Label elements, including precautionary statements

#### Pictogram(s):



#### Signal Word:

**Danger!**

#### GHS Hazard Classification(s):

Flammable Liquid Category 2  
Skin Irritation Category 2  
Eye Irritation Category 2  
Aquatic Acute Category 2  
Aquatic Chronic Category 2

#### Hazard Statement(s):

H225: Highly flammable liquid and vapour  
H315: Causes skin irritation  
H319: Causes serious eye irritation  
H401: Toxic to aquatic life  
H411: Toxic to aquatic life with long lasting effects

#### Prevention Statement(s):

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233: Keep container tightly closed.  
P240: Ground and bond container and receiving equipment.  
P241: Use explosion-proof equipment.  
P242: Use non-sparking tools.  
P243: Take action to prevent static discharges.  
P264: Wash hands thoroughly after handling.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.



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## **Response Statement(s):**

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P370+P378: In case of fire: Use media defined in Section 5 to extinguish.

P321: Specific treatment (See section 4 on this SDS)

P332+P313: If skin irritation occurs: Get medical advice/attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P391: Collect spillage.

## **Storage Statement(s):**

P403+P235: Store in a well-ventilated place. Keep cool.

## **Disposal Statement(s):**

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

## **Other Hazards**

None applicable.

## SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	WT %	GHS CLASSIFICATION
Ethanol	64-17-5	95-99%	FLAM LIQ CAT 2, EYE IRRIT. CAT 2A
N-heptane	142-82-5	1-5%	FLAM LIQ CAT 2, SKIN IRRIT. CAT 2, STOT SE CAT 3 (DROWSINESS / DIZZINESS), ASP TOX CAT 1, AQUATIC ACUTE / CHRONIC CAT 1

**Additional Information:** See SECTION 16 for full classification phrases. Exact concentrations are being withheld as trade secret.

## SECTION 4 - FIRST-AID MEASURES

### **Description of first aid measures**

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and SDS to health professional with contaminated individual.

**EYE CONTACT:** If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

**SKIN CONTACT:** Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

**INHALATION:** If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

**INGESTION:** If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

### **Most important symptoms and effects, both acute and delayed**

This product may cause skin and eye irritation.

### **Medical conditions aggravated by exposure:**

This material or its emissions may aggravate pre-existing disorders involving any target organs mentioned in this Safety Data Sheet as being at risk.

### **Indication of immediate medical attention and special treatment needed**

Treat symptoms and reduce over-exposure.



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## SECTION 5 - FIRE-FIGHTING MEASURES

### Extinguishing media

Dry powder / dry sand, alcohol-resistant foam, dry chemical or CO<sub>2</sub>. Do NOT use water jet.

### Specific hazards arising from the chemical

None known.

Explosion Sensitivity to Mechanical Impact:

Not Sensitive.

Explosion Sensitivity to Static Discharge:

Not Sensitive.

Minimum Ignition Energy (M.I.E.):

No Data at this time

### Special firefighting Procedure

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### Small Spill:

Absorb liquid on paper, vermiculite, floor absorbent or other absorbent material. Transfer to secondary container to be properly disposed.

### Large Spill:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Dike area of spill to prevent spreading. Pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers. Notify proper authorities that a spill has occurred.

### Environmental precautions

Do not let product enter drains, do not allow to sewers/surface or ground water. See Section 12, Ecological information.

### Methods and material for containment and cleaning up

Pick up released product with appropriate implements & return to original container if reusable, or dispose. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

## SECTION 7 - HANDLING and STORAGE

### General Procedures:

For transport, handling and storage, use polyethylene, plastic, lined steel or stainless steel. Protect containers from damage.

### Handling:

Ground lines, containers, and other equipment used during product transfer to reduce the possibility of a static induced spark. Use non-sparking tools and explosion proof equipment.

### Storage:

Store in tightly closed containers in cool, dry, isolated and well-ventilated area away from heat, sources of ignition and incompatible materials. Store drums with bungs in up position.

### Specific end uses

Fuel Additive, Solvent, Food Additive, Cosmetics, Beverages

## SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

### Control parameters

#### EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH	OSHA
Ethanol	64-17-5	1000 ppm	1000 ppm 1900 mg/m <sup>3</sup>
N-heptane	142-82-5	400 ppm	500 ppm 2,000 mg/m <sup>3</sup>



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## Exposure Controls

Currently, international exposure limits are established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use local exhaust ventilation to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.*

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below guidelines listed above, if applicable.

If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

**EYE PROTECTION:** Safety glasses are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

**HAND PROTECTION:** Use protective gloves as appropriate to minimize skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

**BODY PROTECTION:** Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

## SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>PHYSICAL STATE:</b>	Liquid
<b>ODOR:</b>	Agreeable
<b>ODOR THRESHOLD (PPM):</b>	Not Available
<b>APPEARANCE / COLOR:</b>	Colorless
<b>pH:</b>	7.3
<b>MELTING / FREEZING POINT (F°):</b>	Not Applicable
<b>BOILING POINT (F°):</b>	172°F (77.7°C)
<b>FLASH POINT (F°):</b>	55.4°F (13°C)
<b>EVAPORATION RATE (nBuAc = 1):</b>	Not Available
<b>FLAMMABILITY (solid, gas):</b>	Not Applicable
<b>FLAMMABLE LIMITS (in air by volume, %):</b>	Not Applicable
<b>VAPOR PRESSURE (mmHg):</b>	Not Applicable
<b>VAPOR DENSITY (AIR=1):</b>	Not Applicable
<b>RELATIVE DENSITY</b>	Not Available
<b>SOLUBILITY IN WATER (%)</b>	Miscible
<b>PARTITION COEFFICIENT: N-OCTANOL/WATER:</b>	Not Applicable
<b>AUTOIGNITION TEMPERATURE:</b>	Not Applicable
<b>DECOMPOSITION TEMPERATURE:</b>	Not Applicable
<b>VISCOSITY:</b>	1.2 mPa.S (at 20 C, 1.074 mPa.S(at 25 C)
<b>EXPLOSIVE PROPERTIES:</b>	Not Applicable
<b>OXIDISING PROPERTIES:</b>	Not Applicable
<b>Other Information</b>	
<b>SPECIFIC GRAVITY 4°C: (Water = 1)</b>	0.785 g/mL at 20°c
<b>VOC:</b>	Not Applicable
<b>WEIGHT PER GALLON:</b>	Not Applicable

## SECTION 10 - STABILITY and REACTIVITY

**Reactivity:** No data is available.

**Chemical Stability:** Product is stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** No data available.

**Conditions to avoid:** Heat, flames and sparks.

**Incompatible materials:** Strong oxidizing agents, alkali metals, peroxides.





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**Hazardous Decomposition Products:** Hazardous decomposition products formed under fire conditions. - Carbon oxides

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### TOXICITY DATA:

Ethanol: LD50 Oral – Rat – 10,470 mg/kg  
LC50 Inhalation – Rat – 4 h – 30,000 mg/l  
LD50 Dermal – Rabbit – 15,800 mg/kg

N-heptane: LC50 Inhalation – Rat – 4 h – 103,000 mg/m<sup>3</sup>

#### POTENTIAL HEALTH HAZARDS OR RISKS FROM EXPOSURE:

**IRRITANCY OF PRODUCT:** Exposure with this product can be irritating to exposed skin and eyes.

**SENSITIZATION OF PRODUCT:** This product is not considered a skin sensitizer.

**CARCINOGENICITY:** Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

**GERM CELL MUTAGENICITY INFORMATION:** This product does not contain components which are documented as Germ Cell Mutagenicity hazards.

**REPRODUCTIVE TOXICITY INFORMATION:** This product does not contain components which are documented as reproductive hazards.

**SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** No specific data available for this product.

**SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** No specific data available for this product.

**ASPIRATION HAZARD** This product is not anticipated to be an aspiration hazard.

## SECTION 12 - ECOLOGICAL INFORMATION

**ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.**

### Toxicity

Ethanol:

LC50 – Pimephales promelas (fathead minnow) – 14,200 mg/l – 96h  
LC50 – Ceriodaphnia dubia (water flea) – 5,012 mg/l – 48h  
EC50 – Chlorella vulgaris (fresh water algae) – 275 mg/l – 72h

N-heptane:

LC50 - Carassius auratus (goldfish) - 4 mg/l - 24.0 h  
LC50 - Tilapia mossambica - 375 mg/l - 96.0 h  
EC50 - Daphnia magna (Water flea) - 1.50 mg/l - 48 h

### Persistence and degradability

No specific data available on this product.

### Bioaccumulative potential

No specific data available on this product.

### Mobility in soil

No specific data available on this product.

### Results of PBT and vPvB assessment

No specific data available on this product.

### Other adverse effects

No specific data available on this product.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**PRODUCT DISPOSAL:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.



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**COMMENTS:** The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional/local authority requirements.

## SECTION 14 - TRANSPORTATION INFORMATION

**US DOT/IMDG/IATA:**

**PROPER SHIPPING NAME:** Alcohols, n.o.s. (Contains Ethanol and N-heptane)

**HAZARD CLASS NUMBER and DESCRIPTION:** Category 3 Flammable Liquid

**UN IDENTIFICATION NUMBER:** UN1987

**PACKING GROUP:** II

**DOT LABEL(S) REQUIRED:** Flammable Liquid

**NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2016):** 127

**MARINE POLLUTANT:** Ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

## SECTION 15 - REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**UNITED STATES REGULATIONS**

**SARA REPORTING REQUIREMENTS:** This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

**TSCA:** All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

**SARA 311/312:**

Acute Health: Yes      Chronic Health: No      Fire: Yes      Reactivity: No

**U.S. CERCLA REPORTABLE QUANTITY (RQ):**

CERCLA Reportable Quantity RQ: None

**CLEAN WATER ACT:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

**STATE REGULATIONS:** None.

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** None of the ingredients are on the California Proposition 65 lists.

**CANADIAN REGULATIONS:**

**CANADIAN DSL/NDL INVENTORY STATUS:** All of the components of this product are on the DSL Inventory

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** No component of this product is on the CEPA First Priorities Substance Lists.

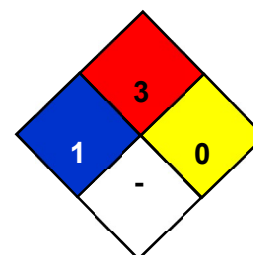
**CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** This product is categorized as per WHMIS 2015 Controlled Product Regulations.

## SECTION 16 - OTHER INFORMATION

**HMIS RATING**

HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**NFPA RATING**



**Caution: HMIS and NFPA ratings are based on a 0-4 rating scale**

0= Minimal Hazard, 1= Slight, 2= Moderate, 3= High, 4= Extreme



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## GENERAL STATEMENTS:

Key or Legend to abbreviations and acronyms

AIHA	- American Industrial Hygiene Association
ACGIH	- American Conference of Governmental Industrial Hygienists
CASRN	- Chemical Abstract Services Registry Number
CFR	- Code of Federal Regulations
D.O.T.	- United States Department of Transportation
IARC	- International Agency for Research on Cancer
OSHA	- Occupational Safety and Health Administration
NIOSH	- National Institute for Occupational Safety and Health
NTP	- National Toxicology Program
PPM	- Parts per million
mg/m <sup>3</sup>	- milligram per cubic meter
kg	- kilogram
L or l	- Liter
n.o.s.	- not otherwise specified
Lbs.	- Pounds
mm <sup>2</sup> /s	- millimeters squared per second
PMCC	- Pensky-Martens Closed Cup
LC50	- Lethal Concentration 50 (concentration in water having a 50% chance of causing death to aquatic life)
EC50	- Effective Concentration that causes 50% inhibition in growth or mobilization
OECD	- Organization for Economic Cooperation and Development
SOCMI	- Synthetic Organic Chemical Manufacturing Industry
VOC	- Volatile Organic Compound

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**Revision History:**  
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- Document creation.

**END OF SDS**