

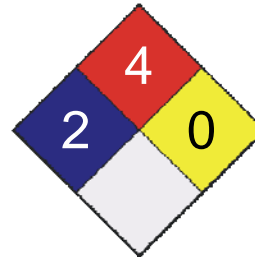
# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product Name** A/C EasyDry (4051-06)  
**CAS #** Mixture  
**Product use** Dehydrating agent that eliminates moisture in refrigeration and AC systems  
**Manufacturer** Nu-Calgon  
 2008 Altom Court  
 St. Louis, MO 63146 US  
 Phone: 314-469-7000 / 800-554-5499  
 Emergency Phone: 1-800-424-9300 (CHEMTREC)

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	* 2
Flammability	4
Physical Hazard	0
Personal Protection	X



## 2. Hazards Identification

**Emergency overview** DANGER  
 Extremely flammable. Contents under pressure. Containers may explode when heated.  
 EYE IRRITANT. Skin irritation possible with prolonged exposure.  
 Contains a potential mutagen.

**Potential short term health effects**

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

**Eyes** Contact with liquid or mist will irritate the eyes.

**Skin** Contact with liquid may cause skin irritation.

**Inhalation** Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

**Ingestion** Not a normal route of exposure. May cause stomach distress, nausea or vomiting.

**Target organs** Blood. Eyes. Liver. Respiratory system. Skin.

**Chronic effects** Prolonged or repeated exposure can cause drying, defatting and dermatitis.

**Signs and symptoms** Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Butane	106-97-8	10 - 30
Propane	74-98-6	10 - 30
Ethanol	64-17-5	1 - 5

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

**Skin contact** Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

**Inhalation** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.

<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Notes to physician</b>	Symptoms may be delayed.
<b>General advice</b>	Do not puncture or incinerate container. Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Flammable aerosol by flame projection test. Containers may explode when heated.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Carbon dioxide. Dry chemical. Foam.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of silicon.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Methods for containment</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Remove sources of ignition. Although the chance of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, absorb spilled material with a non-flammable absorbent such as sand or vermiculite.

## 7. Handling and Storage

<b>Handling</b>	Use good industrial hygiene practices in handling this material.
<b>Storage</b>	Keep out of reach of children. Do not store at temperatures above 49 °C (120.2°F). Keep away from heat, open flames or other sources of ignition.

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## 8. Exposure Controls / Personal Protection

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### Exposure limits

Ingredient(s)	Exposure Limits
Butane	<b>ACGIH-TLV</b> TWA: 1000 ppm <b>OSHA-PEL</b> Not established
Ethanol	<b>ACGIH-TLV</b> TWA: 1000 ppm <b>OSHA-PEL</b> TWA: 1000 ppm
Propane	<b>ACGIH-TLV</b> TWA: 1000 ppm <b>OSHA-PEL</b> TWA: 1000 ppm

### Engineering controls

General ventilation normally adequate.

### Personal protective equipment

#### Eye / face protection

Wear safety glasses with side shields.

#### Hand protection

Rubber gloves. Confirm with a reputable supplier first.

#### Skin and body protection

As required by employer code.

#### Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

#### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

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## 9. Physical and Chemical Properties

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Appearance	Compressed liquefied gas
Color	Colorless
Form	Spray
Odor	Amine
Odor threshold	Not available
Physical state	Gas
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	61.66 °C (143 °F)
Flash point	55.68 °C (132.23 °F) Tag Closed Cup
Evaporation rate	< 1
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	116.63 hPa
Vapor density	> 1 (Air=1)
Specific gravity	9.1
Octanol/water coefficient	Not available
Solubility (H2O)	Not available
Auto-ignition temperature	Not available
VOC (Weight %)	Not available
Viscosity	Not available
Percent volatile	Not available

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## 10. Stability and Reactivity

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<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Aerosol containers are unstable at temperatures above 49°C (120.2°F). Do not mix with other chemicals.
<b>Incompatible materials</b>	Caustics. Acids. Oxidizers.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of silicon.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

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## 11. Toxicological Information

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### Component analysis - LC50

Ingredient(s)	LC50
Butane	658 mg/l/4h rat
Ethanol	31623 ppm rat
Propane	658 mg/l/4h rat

### Component analysis - Oral LD50

Ingredient(s)	LD50
Butane	Not available
Ethanol	3450 mg/kg mouse; 7060 mg/kg rat
Propane	Not available

### Effects of acute exposure

<b>Eye</b>	Contact with liquid or mist will irritate the eye.
<b>Skin</b>	Contact with liquid may cause skin irritation.
<b>Inhalation</b>	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
<b>Ingestion</b>	Not a normal route of exposure. May cause stomach distress, nausea or vomiting.
<b>Sensitization</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Carcinogenicity</b>	See below.

#### ACGIH - Threshold Limit Values - Carcinogens

Ethanol	64-17-5	A4 - Not Classifiable as a Human Carcinogen
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#### IARC - Group 1 (Carcinogenic to Humans)

Ethanol	64-17-5	Monograph 96 [2007] (in alcoholic beverages)
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**Mutagenicity** Mutagenic effects were observed in somatic and reproductive cells of live animals (rats and mice) exposed to high oral doses of ethanol.

**Reproductive effects** Hazardous by WHMIS/OSHA criteria.

**Teratogenicity** Animal studies demonstrate that ingestion of ethanol can cause embryotoxicity, teratogenicity and fetotoxicity in the presence of maternal toxicity.

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## 12. Ecological Information

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**Ecotoxicity** Components of this product have been identified as having potential environmental concerns.

#### Ecotoxicity - Freshwater Fish Species Data

Ethanol	64-17-5	96 Hr LC50 Oncorhynchus mykiss: 12.0-16.0 ml/L [static]; 96 Hr LC50 Pimephales promelas:>100 mg/L [static]; 96 Hr LC50 Pimephales promelas:13400-15100 mg/L [flow-through]
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#### Ecotoxicity - Microtox Data

Ethanol	64-17-5	5 Min EC50 Photobacterium phosphoreum: 35470 mg/L; 30 min EC50 Photobacterium phosphoreum: 34634 mg/L
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#### Ecotoxicity - Water Flea Data

Ethanol	64-17-5	48 Hr LC50 Daphnia magna: 9268 mg/L; 24 Hr EC50 Daphnia magna:10800 mg/L
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**Environmental effects** Not available

**Aquatic toxicity** Not available

**Persistence / degradability** Not available

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<b>Bioaccumulation / accumulation</b>	Not available
<b>Partition coefficient</b>	Not available
<b>Mobility in environmental media</b>	Not available
<b>Chemical fate information</b>	Not available
<b>Other adverse effects</b>	Not available

### 13. Disposal Considerations

<b>Waste codes</b>	Not available
<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

### 14. Transport Information

**U.S. Department of Transportation (DOT)**  
Consumer Commodity ORM-D

**Transportation of Dangerous Goods (TDG - Canada)**  
Consumer Commodity

### 15. Regulatory Information

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canada - CEPA - High Priority Chemicals as Identified by DSL Categorization**

Butane 106-97-8 Batch 4, published November 17, 2007

**Canada - WHMIS - Ingredient Disclosure List**

Butane 106-97-8 1 %  
Ethanol 64-17-5 0.1 %

**US Federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
CERCLA/SARA Hazardous Substances - Not applicable.

**Occupational Safety and Health Administration (OSHA)**

**29 CFR 1910.1200 hazardous chemical** Yes

**CERCLA (Superfund) reportable quantity**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - Yes  
Pressure Hazard - Yes  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Clean Air Act (CAA)** Not available

**Clean Water Act (CWA)** Not available

**WHMIS status** Controlled

**WHMIS classification** Class A - Compressed Gas, Class B - Division 5 - Flammable Aerosol, Class D - Division 2A, 2B

**WHMIS labeling**



**State regulations**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances**

Butane	106-97-8	Present
Ethanol	64-17-5	Present (refers to solutions greater than or equal to 25% which are not beverage alcohols)

**U.S. - California - Proposition 65 - Developmental Toxicity**

Ethanol	64-17-5	developmental toxicity, initial date 10/1/87 (when in alcoholic beverages)
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**U.S. - Massachusetts - Right To Know List**

Butane	106-97-8	Present
Ethanol	64-17-5	Teratogen
Propane	74-98-6	Present

**U.S. - Minnesota - Hazardous Substance List**

Butane	106-97-8	Present
Ethanol	64-17-5	Present
Propane	74-98-6	Simple asphyxiant

**U.S. - New Jersey - Right to Know Hazardous Substance List**

Butane	106-97-8	sn 0273
Ethanol	64-17-5	sn 0844
Propane	74-98-6	sn 1594

**U.S. - Pennsylvania - RTK (Right to Know) List**

Butane	106-97-8	Present
Ethanol	64-17-5	Present
Propane	74-98-6	Present

**U.S. - Rhode Island - Hazardous Substance List**

Butane	106-97-8	Toxic; Flammable
Ethanol	64-17-5	Toxic; Flammable
Propane	74-98-6	Toxic; Flammable

**Inventory name**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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## 16. Other Information

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**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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