



Ethanol

## MATERIAL SAFETY DATA SHEET

(Complies with 29 CFR 1910.1200)

**PRODUCT NAME:** ANHYDROL™ SOLVENT SPECIAL, PM-4081

ADM PRODUCT CODE: 017762

SYNONYMS: Anhydrol™ PM-4081

### SECTION I

MANUFACTURER: Archer Daniels Midland Company  
4666 Faries Parkway  
Decatur, IL 62526

EMERGENCY NUMBER: (800) 424-9300 Chemtrec (USA)  
(217) 424-5200 ADM Corporate

INFORMATION: (888) 371-4408 or (563) 244-5208

DATE: July 27, 2009

### SECTION II Hazardous Ingredients/Identity Information

#### COMPONENTS:

	<u>CAS Number</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Volume</u>
Ethanol	64-17-5	1000 ppm	1000 ppm	79.61%
Isopropanol	67-63-0	400 ppm	400 ppm	8.75%
Water	7732-18-5			6.55%
Methanol	67-56-1	200 ppm	200 ppm	4.20%
Methyl isobutyl ketone (MIBK)	108-10-1	100 ppm	50 ppm	0.89%

TSCA: Components of this product are on the TSCA inventory or are exempt from TSCA inventory requirements.

SARA TITLE III: Section 302, 304 - No components present in this product are listed as extremely hazardous substances in 40CFR Part 355 or are present at levels that could require reporting and emergency planning.

Section 313 (40CFR372.65) – The following components of this product are listed as toxic chemicals and are present at levels which could require reporting and customer notification: Methanol, CAS 67-56-1

CALIFORNIA PROPOSITION 65: No chemicals listed are added to the corn wet milling process. Detectable quantities present in corn are due to uptake from the soil. The State of California has determined “no significant risk” from these chemicals. This product contains trace levels of acetaldehyde, CAS 75-07-0, known to the State of California to cause cancer.

CERCLA: Components present in this product at a level, which could require reporting under the statute, are: Methanol (CAS 67-56-1)  $\leq 4.2000\%$ , Methyl isobutyl ketone (CAS 108-10-1)  $\leq 0.0890\%$ , Acetaldehyde (CAS 75-07-0)  $\leq 0.0010\%$ , Acetone (CAS 67-64-1)  $\leq 0.0002\%$

### **SECTION III – Physical/Chemical Characteristics**

Boiling Point, °F	171.3
Vapor Pressure	43.6 mm Hg
Vapor Density (Air = 1) at 172°F	1.5
Specific Gravity (H <sub>2</sub> O=1) at 20°C	0.8091
Evaporation Rate (Butyl Acetate=1)	3.2
Solubility in Water	Complete
Appearance and Odor	Clear, bright; characteristic odor

### **SECTION IV – Fire and Explosion Hazard Data**

Flash Point (Method Used):	61°F, Tag Open Cup
Flammable Limits (LEL):	3.3%
Flammable Limits (UEL):	19%
Extinguishing Media:	CO <sub>2</sub> , dry chemical or water for small fires; polar solvent foam for large 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 form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static or other ignition sources at locations distant from product handling point. Vapors from this material may settle in low or confined areas or travel a distance to an ignition source and flash back explosively. May produce a floating fire hazard. Static ignition can result. Electrically bond and ground all containers and equipment before transfer or use of material. Flame may be invisible. Approach fire with caution.

### **SECTION V – Reactivity Data**

Stability: Stable

Conditions to Avoid: Avoid heat, sparks and open flames, excessive storage temperatures and/or open containers

Incompatibility (Materials to Avoid): Concentrated nitric or sulfuric acid, Strong oxidizing agents.

Hazardous Combustion Products: Burning can produce the following products: Carbon Monoxide and/or Carbon Dioxide. Carbon Monoxide is highly toxic if inhaled. Carbon Dioxide in sufficient concentrations can act as an asphyxiant.

Hazardous Polymerization: Will not occur

### **SECTION VI – Health Hazard Data**

Routes of Entry: Inhalation, skin, ingestion

Health Hazards (Acute and Chronic): Unconsciousness; coma; respiratory failure and death. Removes natural oils and fats from skin. Moderately toxic (LD50 >5 gm/kg).

Carcinogenicity: Not determined

NTP: Not determined

IARC Monographs: Not determined

OSHA Regulated: Yes

**Swallowing:** May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination, coma and death

**Skin Absorption:** No harmful effects with normal skin. Potentially harmful amounts of material may be absorbed across markedly damaged skin when contact is sustained.

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

**Eyes:** Redness and possible swelling of the conjunctiva may occur. May cause irritation, experienced as stinging with excess blinking and tear production.

**Inhalation:** Low concentrations of vapor may cause irritation of the nose and throat. High concentrations vapor may cause central nervous system depression, with weakness, drowsiness, and loss of consciousness.

Medical Conditions Generally Aggravated by Exposure: Skin contact may aggravate an existing dermatitis. May aggravate an existing liver or kidney disease.

Emergency and First Aid Procedures:

**Swallowing:** If patient is fully conscious, give two glasses of water. Induce vomiting. This should be done only by Medical or experienced first aid personnel. Obtain medical attention without delay.

**Skin:** Remove contained clothing. Wash with soap and water. Obtain medical attention if contact is widespread and prolonged, or if irritation persists.

**Inhalation:** Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, qualified personnel may give oxygen. Obtain medical attention.

**Eyes:** Immediately flush eyes with water and continue washing for several minutes. Remove contact lenses, if worn. Obtain medical attention if discomfort persists.

### **SECTION VII – Precautions for Safe Handling and Use**

Steps to be taken in Case Material is Released or Spilled: Eliminate all ignition sources. Spills should be collected for disposal. Observe government regulations.

Waste Disposal Method: Do not allow to enter sewers where vapors may become ignited. Incinerate in a furnace where permitted under appropriate federal, state and local regulations.

Precautions to be taken in Handling and Storing: Keep away from heat, sparks and open flame. Keep container closed. Use with adequate ventilation.

Other Precautions: Use explosion-proof electrical equipment and non-sparking tools. Ground electrical equipment.

### **SECTION VIII – Control Measures**

Respiratory Protection: Air-supply mask in confined areas.

Ventilation: Local exhaust ventilation should be used

Protective Gloves: Neoprene, PVC-coated

Eye Protection: Safety Glasses

Other Protective Clothing or Equipment: Eye bath, safety shower

Work/Hygienic Practices: Practice good housekeeping.

#### **HMIS Hazard Rating Index**

<b>2</b>	<b>HEALTH (Chronic effects)</b>
<b>3</b>	<b>FLAMMABILITY</b>
<b>0</b>	<b>REACTIVITY</b>
<b>H</b>	<b>PROTECTIVE EQUIPMENT</b>

#### **NFPA D.O.T. Disposal**

<b>2</b>	<b>HEALTH</b>
<b>3</b>	<b>FLAMMABILITY</b>
<b>0</b>	<b>REACTIVITY</b>
<b>N/A</b>	<b>OTHER</b>

### **SECTION IX – Transportation Information**

#### **U.S. Dept. of Transportation**

<b>ID Number</b>	<b>UN 1987</b>
<b>Proper Shipping Name</b>	<b>Alcohols, n.o.s.</b>
<b>Hazard Class</b>	<b>3</b>
<b>Packing Group</b>	<b>II</b>
<b>Label Statement</b>	<b>Flammable Liquid</b>

#### **Water Transportation**

<b>ID Number</b>	<b>UN 1987</b>
<b>Proper Shipping Name</b>	<b>Alcohols, n.o.s.</b>
<b>Hazard Class</b>	<b>3</b>
<b>Packing Group</b>	<b>II</b>

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The information in this data sheet does not constitute any contractual warrant as to product properties and is based on the current state of knowledge. For all chemical emergencies, call Chemtrec at 1-800-424-9300.