

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

NOTE: CHEMTREC number is to be used in the event of a chemical emergency involving a spill, leak, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service at 1800-486-0480 for assistance.

Effective Date: 07/27/1998

Page: 1 of 14

Union Carbide urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety; 2) Furnish this same information to each of its customers for the product; and 3) Request its customers to notify their employees customers, and other users of the product of this information.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 IDENTIFICATION

Product Name	Hudson Diamond Extender (DE-2)
Chemical Name	Denatured Ethanol
Chemical Family	Alcohols
Common Name	ANHYDROL® SOLVENT SPECIAL 190 Proof PM-4081
Formula	Not Applicable (mixture)
Synonym	Special Industrial Solvent, Government Formula AI

1.2 COMPANY IDENTIFICATION

Hudson Supply Company
4500 Lee Road
Cleveland, Ohio 44128

1.3 EMERGENCY TELEPHONE NUMBER

24 hours a day: 18004249300 (Chemtrec)
Number for non-emergency questions concerning MSDS (800) 486-0480
Additional information on this product may be obtained by calling the Union Carbide Corporation Customer Service Center at 1-800-568-4000.

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Effective Date: 07/271998

Effects of Single Acute Overexposure

Page 3 of 14

Inhalation May cause dizziness, drowsiness, disturbances of vision, and tingling, numbness, and shooting pains in the hands and forearms. High vapor concentrations may cause a burning sensation in the nose and throat, and stinging and watering in the eyes. At concentrations which cause irritation, dizziness, faintness, drowsiness, nausea, and vomiting may also occur.

Eye Contact Liquid may cause discomfort in the eye with slight excess redness and possibly swelling of the conjunctiva. May cause temporary superficial injury of the cornea.

Skin Contact Prolonged contact may cause defatting of the skin with possible reddening and itchiness.

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

Swallowing May cause nausea, abdominal pain, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behavior, visual disturbances, drowsiness, coma, and death. There may be a delay of several hours between swallowing methanol and the onset of signs and symptoms. The effects observed are in part due to acidosis and partially to cerebral edema. Visual effects include blurred vision, diplopia, changes in color perception, restriction of visual fields, and complete blindness due to optic nerve mid retinal injury. Ingestion of moderate quantities of methanol also produces metabolic acidosis. Onset of symptoms may be delayed up to 48 hours. 60-200 ml of methanol is a fatal dose for most adults. Ingestion of as little as 10 ml has caused blindness. With massive overdoses, liver, kidney and heart muscle injury have been described.

Chronic Overexposure

Effects of Repeated Overexposure Long-term repeated overexposure to methanol vapor concentrations or 3000 ppm or greater may allow a cumulative effect to occur with resulting nausea, vomiting, headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, clouded and double vision. Liver and/or kidney injury may occur. Prolonged overexposure at levels of 800-1000 ppm may result in severe eye damage in some persons. Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.

Other Effects of Overexposure 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 the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders, and small size head.

Medical Conditions Aggravated by Exposure

Due to its defatting properties, methanol may aggravate an existing skin condition, e.g., eczema. Due to its potential for liver and kidney injury, methanol may aggravate existing liver and/or kidney diseases. Repeated exposure to ethanol may aggravate liver injury produced from other causes.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS See section 12 for Ecological Information

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Effective Date: 07/27/1998

4. FIRST AID PROCEDURES

Page: 4 of 14

4.1 INHALATION

Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

4~2 EYE CONTACT

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

4.3 SKIN CONTACT

Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if contact has been widespread and prolonged. or if irritation persists. Wash clothing before reuse.

4.4 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. If medical advice is delayed and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight.

4.5 NOTES TO PHYSICIAN

The combination of visual disturbances, metabolic acidosis, and formic acid in the urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 ml per hour) allows it to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated by means of intravenous sodium bicarbonate, and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance. Folates may be administered to enhance the metabolism of formaldehyde. 4-Methyl pyrazole has been suggested as an antidote: because of its alcohol dehydrogenase inhibiting effects, it reduces the production of formate and the development of metabolic acidosis. However the value of this antidote remains to be proven in humans.

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

5. FIRE FIGHTING MEASURES

Page 5 of 14

5.1 FLAMMABLE PROPERTIES

Effective Date: 07/27/1998

Flash Point - Closed Cup: Tag Closed Cup ASTM D 56 16C 61 OF

Flash Point - Open Cup: Tag Open Cup ASTM D 1310 23C 74F

Autoignition Temperature: Not currently available.

Flammable Limits In Air:

Lower	3.3%(V)	(Ethanol)	Upper	19.0%(V)	(Ethanol)
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5.2 EXTINGUISHING MEDIA

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

5.3 EXTINGUISHING MEDIA TO AVOID

No information currently available.

5.4 SPECIAL FIRE FIGHTING PROCEDURES

Use water spray to cool fire-exposed containers and structures.

5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Use self-contained breathing apparatus and protective clothing.

5.6 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 discharges 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 long distance to an ignition source and flash back explosively.

Static ignition hazard can result from handling and use. Electrically bond and ground all containers personnel and equipment before transfer or use of material. Use proper bonding and grounding during product transfer as described in National Fire Protection Association Document NFPA 77. This material may produce a floating fire hazard.

HUDSON SUPPLY CO.

4500 LEE RD.

CLEVELAND, OHIO 44128

Effective Date: 07/27/1998

5.7 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.

6. ACCIDENTAL RELEASE MEASURES

Page: 6 of 14

Steps to be taken if Material is Released or Spilled:

Extinguish and do not turn on any ignition source until the area is determined to be free from fire or explosion hazard. Small spills could be flushed with large amounts of water. Larger spills should be collected for disposal. Observe government regulations.

Personal Precautions: Wear suitable: protective equipment. See Section 8.2 - Personal Protection.

7. HANDLING AND STORAGE

7.1 HANDLING

General Handling

Do not swallow.

Keep away from heat, sparks and flame.

Avoid breathing vapor.

Do not get in eyes, on skin, on clothing.

Keep container closed.

Use with adequate ventilation.

Vapor forms 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 discharges or other ignition sources at locations distant from product handling point and may flashback explosively.

Wash thoroughly after handling.

FOR INDUSTRY USE ONLY.

Ventilation

General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled in closed equipment. Special local ventilation is needed at points where vapors can escape to the workplace air.

Other Precautions

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Page: 7 of 14

Vapor may settle in low or confined areas, or travel a long distance to an ignition source and flash back explosively.

7.2 STORAGE

Store at normal ambient temperatures.

Effective Date: 07127/1998

18. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 EXPOSURE LIMITS

Component	Exposure Limits	Skin	m State
Ethanol	1000ppmTWA8 ACGIH		
	1880 mg/m ³ TWA8 ACGIH		
	1000 ppm TWA8 OSHA		
	1900 mg/m ³ TWA8 OSHA		
Methanol	200 ppm TWA8 ACGIH	Yes	
	262 mg/m ³ TWA8 ACGIH	Yes	
	250 ppm STEL ACGIH	Yes	
	328 mg/m ³ STEL ACGIH	Yes	
	200 ppm TWA8 OSHA	Yes	
	260 mg/m ³ TWA8 OSHA	Yes	
	250 ppm STEL OSHA	Yes	
Isopropanol	325 mg/m ³ STEL OSHA	Yes	
	400 ppm TWA8 ACGIH		
	983 mg/m ³ TWA8 ACGIH		
	1230 mg/m ³ STEL ACGIH		
	500 ppm STEL ACGIH		
Methyl isobutyl ketone	400 ppm TWA8 OSHA		
	980 mg/m ³ TWA8 OSHA		
	1225 mg/m ³ STEL OSHA		
	500 ppm STEL OSHA		
	205 mg/m ³ TWA8 ACGIH		
	50 ppmTWAS ACGIH		
	307 mg/m ³ STEL ACGTH		
	75 ppmSTEL ACGIH		
205 mg/m ³ TWA8 OSHA			
50 ppm TWA8 OSHA			
300 mg/m ³ STEL OSHA			
75 ppmSTEL			

8.2 PERSONAL PROTECTION

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Page: 8 of 14

Respiratory Protection: Use self-contained breathing apparatus in high vapor concentrations.

Ventilation: General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled in closed equipment. Special local ventilation is needed at points where vapors can be expected to escape to the workplace air.

Eye Protection: Safety glasses or monogoggles.

Effective Date: 07/27/1998

Protective Gloves: Neoprene or PVC-coated

Other Protective Equipment: Eye bath, safety shower, chemical apron.

8.3 ENGINEERING CONTROLS

PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a Technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Pink

pH: Not currently available.

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Page: 9 of 14

Solubility in Water (by weight); 20C 100%

Effective Date: 07/27/1998

Odor: Fragrant

Flash Point - Closed Cup; Tag Closed Cup ASTM D 56 16oC

61°F

Flash Point - Open Cup; Tag Open Cup ASTM D 1310 23oC

74F

Percent Volatiles: 100 Wt%

Boiling Point (760 mmHg): 77.38 °C 171.30 OF

Freezing Point: <-90oC <-130oF

Specific Gravity (H2O = 1): 0.80910 20C /20C

Vapor Pressure at 20oC: 5.81kPa 43.6 mmHg

Vapor Density (air = 1) 1.5

Evaporation Rate (Butyl Acetate = 1): 3.20

Melting Point: *Not applicable.*

10. STABILITY AND REACTIVITY

10.1 STABILITY/ INSTABILITY Stable

Incompatible Materials: Strong oxidizing agents. Strong inorganic acids.

10.2 HAZARDOUS POLYMERIZATION Will Not Occur.

**HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128**

Page: 10 of 14

10.3 INHIBITORS/STABILIZERS Not applicable.

10. TOXICOLOGICAL INFORMATION

Effective Date: 07/27/1998

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS

The international Agency for Research On Cancer (IARC) has determined that the consumption of alcoholic beverages is causally related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not been verified in studies with laboratory animals. Established uses of denatured ethanol and non-beverage uses of pure ethanol are not considered to pose any significant cancer hazard. Eihanol has been shown to have a weak skin sensitizing potential in a vcry small percentage of the population.

12. ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL FATE

Partial information may be available, call Union Carbide.

12.2 ECOTOXICITY

Partial information may be available, call Union Carbide.

12.3 FURTHER INFORMATION NONE

**HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128**

Page: 11 of 14

13. DISPOSAL CONSIDERATIONS

13.1 WASTE DISPOSAL METHOD

Incinerate in a furnace where permitted under Federal, State, and local regulations. Dispose in accordance with all applicable Federal, State, Provincial, and local environmental regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

13.2 DISPOSAL CONSIDERATIONS

See Section 13.1

Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permissible under applicable rules, regulations and/or laws governing your location.

14. TRANSPORT INFORMATION

14.1 U.S. D.O.T.

NON-BULK

Proper Shipping Name: ETHANOL SOLUTIONS

Technical Name:

ID Number: UN1170

Hazard Class : 3

Packing Group : PG II

BULK

Proper Shipping Name : ETHANOL SOLUTIONS

Technical Name

ID Number: UN1170

Hazard Class : 3

Packing Group : PG II

This information is not intended to convey all specific regulatory or operational requirements information relating to this product. Additional transportation system information can be obtained through your UCC sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

15.1 FEDERAL/NATIONAL

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Page: 12 of 14

The following components of this product are specifically listed as hazardous substances in 40 CFR 302.4 (unlisted hazardous substances are not identified) and are present at levels which could require reporting.

Component	CAS#	Amount
Methanol	67-56-1	<=4.2000%
Methyl isobutyl ketone	108-10-1	<=0.0890%
Acetaldehyde	75-07-0	<=0.0010%
Acetone	67-64-1	<=0.0002%

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTIONS 302 AND 304

The following components of this product are listed as extremely hazardous substances in 40 CFR Part 355 and are present at levels which could require reporting and emergency planning:

None.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313

The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and are present at levels which could require reporting and customer notification under Section 313 and 40 CFR Part 372;

Component	CAS#	Amount
Methanol	67-56-1	<=4.2000%

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTIONS 311 AND 312

Delayed Hazard: Yes
Fire Hazard : Yes
Immediate Health Hazard : Yes
Reactive Hazard: No
Sudden Release of Pressure Hazard : No

TOXIC SUBSTANCES CONTROL ACT (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA inventory requirements.

15.2 STATE/LOCAL

PENNSYLVANIA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT

This product is subject to the Worker and Community Right-to-Know Act. The following components of this product are at levels which could require identification in the MSDS:

Component	CAS#	Amount
Ethanol	64-17-5	<=79.6100%
Isopropanol	67-63-0	<=8.7500%
Methanol	67-56-1	<=4.2000%

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Pages: 13 of 14

MASSACHUSETTS (HAZARDOUS SUBSTANCE DISCLOSURE BY EMPLOYERS)

The following components of this product appear on the Massachusetts Substance List and are present at levels which could require identification in the MSDS:

Component	CAS#	Amount
Ethanol	64-17-5	<=79.6100%
Isopropanol	67-63-0	<=8.1500%
Methanol	67-56-1	<=4.2000%
Acetaldehyde	75-07-0	<=0.0010%

NEW YORK (HAZARDOUS SUBSTANCES BULK STORAGE ACT)

NEW YORK STATE BULK STORAGE REGULATIONS (6 NYCRR Parts 595-599) This product is covered by 6 NYCRR for Bulk Storage and Release Reporting and Response. Technical guidance and recommended practices are as follows: - **MATERIALS OF CONSTRUCTION** Suitable materials of construction are: Steel, stainless steel, baked phenolic lined steel, galvanized steel, copper, and copper alloy. - **Materials not to be used:** Aluminum. Plastics are not recommended for flammable liquids. - **STORAGE SYSTEM DESIGN** Design should comply with applicable industry, Federal and local codes for a Class 1B Flammable liquid with regards to mechanical, electrical, safety and health components. Should also comply with NYS/DEC Chemical Bulk Storage regulations Parts 598.1, 598.2, 598.3, and 598.5 (for existing tanks) or Parts 599.1 and 599.10 (for new or substantially modified tanks). - **CONDITIONS FOR STORAGE** Stow at normal ambient temperatures. - **INSPECTION AND MAINTENANCE** A testing/inspection program which ensures structural integrity and proper system operation should be established. Inspection and maintenance procedures and testing of equipment should comply with NYS/DEC regulations Parts 598.6 to 598.10. - **TRANSFER AND UNLOADING** These operations should comply with NYS/DEC regulations, Part 598.4.

CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986)

This product contains the following chemical(s) known to the State of California to cause cancer:

Component	CASM	Amount
Acetaldehyde	75-07-0	<=0.0010%

CALIFORNIA SCAQMD RULE 443.1 (SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 443.1, LABELING OF MATERIALS CONTAINING ORGANIC SOLVENTS)

HUDSON SUPPLY CO.
4500 LEE RD.
CLEVELAND, OHIO 44128

Page: 14 of 14

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules regulations and laws relating to the product being used.

16. OTHER INFORMATION

16.1 AVAILABLE LITERATURE AND BROCHURES

ADDITIONAL INFORMATION: There may be additional product safety information on this product, which may be obtained by calling your Union Carbide Corporation Sales or Customer Service Contact.

16.2 SPECIFIC HAZARD RATING SYSTEM

HMIS	ratings for this product are:	H-2	F-3	S-0
NFPA	ratings for this product are:	H-1	F-3	S-0

These ratings are part of specific hazard communications program(s) and should be disregarded where individuals are not trained in the use of these hazard rating systems. You should be familiar with the hazard communication applicable to your workplace.

16.3 RECOMMENDED USES AND RESTRICTIONS

FOR INDUSTRY USE ONLY

Hudson Supply Company's knowledge as of the date hereof and is designed to assist our customers; however, Hudson Supply Company makes no representation as to its completeness or accuracy. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to suitability for their specific applications. Any use which Hudson Supply Company customers or third parties make of this information, or any reliance on, or decisions made based upon it, are the responsibility of such customer or third party. Hudson Supply Company disclaims responsibility for damages, or liability, of any kind resulting from the use of this information. THERE ARE NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THIS INFORMATION OR TO THE PRODUCT IT DESCRIBES. IN NO EVENT SHALL HUDSON SUPPLY COMPANY BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.