

Issue Date: 21-Dec-2004

Revision Date: 21-Apr-2022

Version 1

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Flaw-Finder AG-2D-DH Penetrant Developer

### Other means of identification

**SDS #** AGC-203

**Product Code** AG-2D-DH

**UN/ID No** UN1950

**Other Information** Package type: Aerosol.

### Recommended use of the chemical and restrictions on use

**Recommended Use** Penetrant Developer.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

AMERICAN GAS & CHEMICAL COMPANY, LTD  
 220 Pegasus Avenue  
 Northvale NJ 07647

#### **Emergency Telephone Number**

**Company Phone Number** Phone: 201-767-7300 Fax: 201-767-1741

**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Milky Liquid

**Physical State** Liquid

**Odor** Sweet odor

### Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Gases Under Pressure	Compressed Gas

### Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin  
 Causes mild skin irritation

### Signal Word

**Warning**

### Hazard Statements

Harmful if inhaled  
 May cause an allergic skin reaction  
 May cause drowsiness or dizziness  
 May cause eye irritation  
 May be harmful if swallowed  
 Contains gas under pressure; may explode if heated



### Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Contaminated work clothing should not be allowed out of the workplace  
 Wear protective gloves

### Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation or rash occurs: Get medical advice/attention  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a poison center or doctor/physician

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Precautionary Statements - Storage**

Store locked up

Protect from sunlight. Store in a well-ventilated place

**Other Hazards**

Toxic to aquatic life with long lasting effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
1,2-Trans-Dichloroethylene	156-60-5	29
1,1,1,2-Tetrafluoroethane	811-97-2	28
Methyl Nonafluoro-Isobutyl Ether	163702-08-7	17
Methyl Nonafluoro-Butyl Ether	163702-07-6	17
Acetone	67-64-1	5
Talc	14807-96-6	2
Silicon Dioxide	7631-86-9	1

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>Eye Contact</b>	If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call physician.
<b>Skin Contact</b>	Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. Call a physician immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
<b>Ingestion</b>	Do not induce vomiting. Call a physician immediately. Potential for aspiration if swallowed.

**Most important symptoms and effects**

<b>Symptoms</b>	High vapor concentrations are irritating to the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Prolonged or repeated skin contact tends to remove skin oils possibly leading to irritation and dermatitis. Contact may cause eye irritation.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Pressurized container: May burst if heated.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to keep fire-exposed containers cool.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

<b>Personal Precautions</b>	Remove all sources of ignition. Use personal protective equipment as required. Ventilate confined spaces.
<b>Environmental Precautions</b>	Try to prevent the material from entering drains or water courses.

**Methods and material for containment and cleaning up**

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Contain and collect with an inert absorbent and place into an appropriate container for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on Safe Handling** Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Use only in well-ventilated areas. Contaminated work clothing should not be allowed out of the workplace. Avoid prolonged or repeated contact with skin. Do not get in eyes. Do not puncture or incinerate cans.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, and flame. Store away from incompatible materials. Do not store above the following temperature: 35°C (95°F).

**Incompatible Materials** Strong oxidizers. Alkalis or alkaline earth metals powdered Al, Zn, Be, etc.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,2-trans-Dichloroethylene 156-60-5	TWA: 200 ppm	-	-
Acetone 67-64-1	TWA: 500 ppm STEL: 750 ppm	TWA: 1000 ppm; 2400 mg/m3	TWA: 250 ppm; 590 mg/m3

### Appropriate engineering controls

**Engineering Controls** Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Use splash goggles or face shield when contact may occur.

**Skin and Body Protection** For prolonged or repeated skin contact use suitable protective gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory Protection** Use supplied-air respiratory protection in confined or enclosed spaces.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	<b>Odor</b>	Sweet
<b>Appearance</b>	Milky White Liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	White		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	Not determined	
<b>Melting Point/Freezing Point</b>	Not determined	
<b>Boiling Point/Boiling Range</b>	44.6 °C / 112 °F	
<b>Flash Point</b>	None	
<b>Evaporation Rate</b>	< 1	(Water = 1)
<b>Flammability (Solid, Gas)</b>	Non-flammable aerosol	
<b>Upper Flammability Limits</b>	None	
<b>Lower Flammability Limit</b>	None	
<b>Vapor Pressure</b>	517 mm Hg	@ 20°C (68°F)
<b>Vapor Density</b>	4.0	(Air=1)
<b>Specific Gravity</b>	1.40	@ 20°C (68°F)
<b>Water Solubility</b>	Insoluble in water	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Auto-ignition Temperature</b>	Not determined	
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	Not determined	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

#### **Hazardous Polymerization**

Hazardous polymerization does not occur.

### Conditions to Avoid

Keep out of reach of children.

### Incompatible Materials

Strong oxidizers. Alkalis or alkaline earth metals powdered Al, Zn, Be, etc.

### Hazardous Decomposition Products

Decomposition of this product at temperature above 300° C can form Hydrogen Fluoride (HF), but HF will only accumulate with continuous exposure to excess heat in a sealed vessel.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### **Product Information**

#### **Eye Contact**

Avoid contact with eyes.

#### **Skin Contact**

May be harmful in contact with skin. May cause an allergic skin reaction. Causes mild skin irritation.

#### **Inhalation**

Harmful if inhaled.

#### **Ingestion**

May be harmful if swallowed.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1,2-trans-Dichloroethylene 156-60-5	= 1235 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	-
Methyl Nonafluoro-isobutyl Ether 163702-08-7	> 5 g/kg ( Rat )		= 100,000 ppm ( Rat ) 4 h
Methyl Nonafluoro-butyl Ether 163702-07-6	> 5 g/kg ( Rat )		= 100,000 ppm ( Rat ) 4 h
1,1,1,2-Tetrafluoroethane 811-97-2	-	-	= 1500 g/m <sup>3</sup> ( Rat ) 4 h
Acetone 67-64-1	1800 mg/kg	20000 mg/kg	=76 mg/L/4H

### Information on physical, chemical and toxicological effects

#### **Symptoms**

Please see section 4 of this SDS for symptoms.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### **Carcinogenicity**

Not classifiable as a human carcinogen.

#### **Legend**

*IARC (International Agency for Research on Cancer)*

*Group 3 IARC components are "not classifiable as human carcinogens"*

### Numerical measures of toxicity

Not determined

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,2-trans-Dichloroethylene 156-60-5		135: 96 h Lepomis macrochirus mg/L LC50 static	EC50 = 1142 mg/L 5 min EC50 = 1546 mg/L 30 min	
1,1,1,2-Tetrafluoroethane 811-97-2		96 hour LC50-Rainbow Trout: 450 mg/L		48 hour EC50-Daphnia magna: 980 mg/L
Acetone 67-64-1		96 hour LC50-Rainbow Trout: 5540 mg/L		

**Persistence/Degradability** Not determined.

**Bioaccumulation** Not determined.

**Mobility**

Chemical Name	Partition Coefficient
1,2-trans-Dichloroethylene 156-60-5	1.48

**Other Adverse Effects** Not determined

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

**Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**US EPA Waste Number**

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
1,2-trans-Dichloroethylene 156-60-5	U079	Included in waste streams: F024, F025, F039, K073		U079
Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
1,2-trans-Dichloroethylene 156-60-5	Category I - Volatiles		Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

**California Hazardous Waste Status**

**14. TRANSPORT INFORMATION**

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

**UN/ID No** UN1950  
**Proper Shipping Name** Aerosols  
**Hazard Class** 2.2

**IATA**

**UN/ID No** UN1950  
**Proper Shipping Name** Aerosols, non-flammable  
**Hazard Class** 2.2

**IMDG**

**UN/ID No** UN1950  
**Proper Shipping Name** Aerosols  
**Hazard Class** 2.2  
**Marine Pollutant** This material may meet the definition of a marine pollutant

## 15. REGULATORY INFORMATION

### International Inventories

**TSCA** Listed

#### Legend:

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

### US Federal Regulations

#### CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
1,2-trans-Dichloroethylene 156-60-5	1000 lb 1 lb		RQ 1000 lb final RQ RQ 454 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ

#### SARA 313

Chemical Name	SARA/CERCLA RQ (lb)	SARA EHS TPQ (lb)
Acetone 67-64-1	5000	none

#### CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
1,2-trans-Dichloroethylene 156-60-5 ( <35 )			X	
Acetone 67-64-1				

### US State Regulations

#### U.S. State Right-to-Know Regulations

Chemical Name	NJ	MA	PA	RI	MN	CA
1,2-trans-Dichloroethylene 156-60-5		X	X			
Acetone 76-64-1	X	X	X	X	X	X

## 16. OTHER INFORMATION

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	2	0	0	Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	2	0	0	B

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**End of Safety Data Sheet**