

Issue Date: 21-Dec-2004

Revision Date: 08-Dec-2022

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Flaw-Finder AG-1D-RH Cleaner

Other means of identification

SDS # AGC-031-1

Product Code AG-1D-RH

Other Information Package type: Gallons, 5 gallon Can, 55 Gallon Drum

Recommended use of the chemical and restrictions on use

Recommended Use Penetrant cleaner.

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 Clear liquid

Physical State Liquid

Odor Citrus odor

Classification

Skin Sensitization	Category 1
Skin Corrosion/Irritation	Category 3
Acute Toxicity - Inhalation	Category 4

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed
 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

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

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	<65
Methyl Nonafluoro-isobutyl Ether	163702-08-7	<17
Methyl Nonafluoro-butyl Ether	163702-07-6	<17
d-Limonene	5989-27-5	<5

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

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

Most important symptoms and effects

Symptoms	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

Notes to Physician	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

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

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	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.
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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	-	-

Appropriate engineering controls

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

Physical State	Liquid	Odor	Citrus odor
Appearance	Clear liquid	Odor Threshold	Not determined
Color	Clear		
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	44.6 °C / 112 °F		
Flash Point	None		
Evaporation Rate	< 1	(Water = 1)	
Flammability (Solid, Gas)	Non-flammable aerosol		
Upper Flammability Limits	None		
Lower Flammability Limit	None		
Vapor Pressure	517 mm Hg	@ 20°C (68°F)	
Vapor Density	4.0	(Air=1)	
Specific Gravity	1.40	@ 20°C (68°F)	
Water Solubility	Insoluble in water		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	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.
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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. May cause temporary irritation on eye contact.
Skin Contact	May be harmful in contact with skin. May cause an allergic skin reaction. Causes mild skin irritation.
Inhalation	Harmful if inhaled. Vapor may irritate respiratory tract.
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 163702-07-7	> 5 g/kg (Rat)	> 2 g/kg (Rat)	= 100,000 ppm (Rat) 4 h
Methyl Nonafluoro-butyl Ether 163702-07-6	> 5 g/kg (Rat)	> 2 g/kg (Rat)	= 100,000 ppm (Rat) 4 h
d-Limonene 5989-27-5	-	> 5 g/kg (Rabbit)	-

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.

Chemical Name	ACGIH	IARC	NTP	OSHA
d-Limonene 5989-27-5		Group 3		X

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
d-Limonene 5989-27-5		0.619 - 0.796: 96 h Pimephales promelas mg/L LC50 flow- through 35: 96 h Oncorhynchus mykiss mg/L LC50		

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

Chemical Name	California Hazardous Waste Status
d-Limonene 5989-27-5	Toxic

14. TRANSPORT INFORMATION

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

DOT Not regulated

IATA Not regulated

IMDG Not regulated

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/NDSL - 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

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	

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
1,2-trans-Dichloroethylene 156-60-5		X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	2	0	0	Not determined
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	2	0	0	B

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 Revision Note: Classification Revision

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End of Safety Data Sheet