



MATERIAL SAFETY DATA SHEET

Material Number/Product Name

819807 - AUDEL DEVELOPER REPLENISHER, PART B

SECTION 1 - COMPANY IDENTIFICATION

FUJI NDT SYSTEMS	Technical Contact:
Division of FUJI MEDICAL SYSTEMS USA	Non-Emergency No. 1-800-323-2546
1055 Stevenson Court, Bldg 105	Emergency No. 1-800-424-9300
Roselle, IL 60172	Emergency No. 1-703-527-3887
	(Outside US & Canada)

Catalog / Sub-assembly Number: 819807

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Number	Wt.%	OSHA PEL (mg/m3)	ACGIH (mg/m3)
Benzenepropanoic Acid Derivative	63684-32-2	1-5%	NE	NE
Acetic Acid	64-19-7	10-20%	25	25 TWA; 37 STEL
Diethylene Glycol	111-46-6	60-80%	NE	NE
Indazole Derivative	5401-94-5	0.1-1%	NE	NE
Pyrazolidinone Derivative	92-43-3	3-7%	NE	NE
Water	7732-18-5	1-5%	NE	NE

NE=Not Established STEL=Short Term Exposure Limit C=Ceiling Limits

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: clear, yellow, aqueous liquid
Odor: strong vinegar odor

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor. Do not swallow. Wear chemical safety goggles & neoprene gloves and apron. Wash thoroughly after handling. Keep container closed when not in use. Use only with adequate ventilation. May produce hazardous gases under fire conditions. During emergencies, wear equipment to protect eyes, skin and respiratory tract. Dike or absorb spills to keep material and run-off from entering sewer or waterways. Use water spray to cool containers and disperse vapors. Box may contain multiple containers having multiple components. Consult all MSDSs.

HMIS: Health: 3 Flammability: 2 Reactivity: 0 Protection: C
NFPA: Health: 3 Flammability: 2 Reactivity: 0 Spec. Haz.: CORR

Hazard Rating: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
A = Gloves B = Gloves & Goggles C = Gloves, Goggles & Apron
D = Face Shield, Gloves, Goggles & Apron

UN NO: UN1993
DOT GUIDE: ERG Guide 154

Potential Health Effects:

- Skin: Contact causes severe irritation.
- Eyes: Corrosive
- Inhalation: Severe irritant to respiratory tract and mucous membranes.
- Ingestion: Ingestion of product may cause nausea and vomiting.

Conditions aggravated by exposure:

None expected except those associated with acute effects.

Carcinogenicity: IARC: N NTP: N OSHA: N

SECTION 4 - FIRST AID MEASURES

- Eye Contact: Immediately flush with COOL water for 15 minutes. Call a physician.
- Skin Contact: In case of skin contact; immediately flush with cool water for 15 minutes. Call a physician.
- Ingestion: In case of ingestion; seek immediate medical attention.
- Inhalation: Immediately remove victim to fresh air. Call a physician for further recommendations.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties

- Flash Point: 109 deg F (CC)
 - Autoignition Temperature: N/A deg F (CC)
 - Explosion Limits: Lower: 5. vol.%; Not Tested
4
Upper: 16 vol.%;
- OSHA Class II Combustible Liquid

Extinguishing Media:

Choose extinguishing media suitable for the surrounding materials, such as water spray, dry chemical, alcohol foam or carbon dioxide.

Unsuitable Extinguishing Media:

No restrictions on media based on knowledge of this material.

Fire Fighting Instructions:

Water spray should be used to cool fire exposed containers and to disperse un-ignited vapors. Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when material has ignited or becomes involved in a fire. Try to remove material containers from fire area if can be accomplished without risk to personnel.

Evacuate area and fight fire from a safe distance. Call your local fire department. Wear positive pressure, breathing apparatus and protect eyes and skin. Use water to cool fire-exposed containers, to protect personnel and to disperse vapors and spills. Fire media run-off can damage the environment. Dike and collect media used to fight fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small Spills:

For incidental spills and leaks, wear adequate personal protective equipment, see Section 8 (Exposure & Personal Protection). Spills should be contained by, and covered with suitable absorbent material and removed for disposal. Dispose of according to local and national regulations. Prevent from entering into soil, waterways and groundwater.

Large Spills:

For larger spills, requiring emergency response, neoprene boots and respiratory protection may also be required. Follow OSHA regulations and NIOSH recommendations for respiratory protection (see 29 CFR 1910.134 and NIOSH pub. 87-108) and emergency response (see 29 CFR 1910.120). Hold in properly labeled DOT-approved waste container. Dike large spills to minimize

the spill area. Material can cause environmental damage.

SECTION 7 - HANDLING / STORAGE

Handling:

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor.
Do not swallow. Wear chemical safety goggles and neoprene gloves and apron.
Wash thoroughly after handling. Keep container closed when not in use. Use only with adequate ventilation.

Storage:

Store in a cool, dry, well-ventilated area. Keep container closed when not in use.
Store in a cool, dry, well-ventilated area away from all sources of ignition. Keep containers closed when not in use.

SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION

Ventilation:

Good general ventilation should be sufficient for most processing operations. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Ten (10) or more room air changes per hour containing a minimum of 15% fresh air will meet these requirements. Consult ASHRAE 62-1989 for further requirements.

Personal Protective Equipment

Respiratory Protection: If used under normal operating conditions and with adequate ventilation, respiratory protection is not required. However, refer to OSHA 29 CFR 1910.134.

Skin Protection: Neoprene gloves and apron
Eye Protection: Chemical safety goggles

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: clear, yellow, aqueous liquid

Odor: strong vinegar odor

Change in Physical State:

Boiling Point: >212 deg F
Melting Point: N/D deg F
Specific Gravity: 1.12 Water=1
Vapour Pressure: ~13 mmHg @ 20C
Viscosity: N/A
Solubility in Water: Complete
pH Value: 3.5
VOC (lbs/gal): 0 (Minus water)

SECTION 10 - STABILITY AND REACTIVITY

Hazardous Polymerization:

Hazardous polymerization WILL NOT occur if product is used and stored as directed. Product is stable if used and stored as directed.

Hazardous Decomposition Products:

Oxides of Nitrogen; Oxides of Carbon; Oxides of Sulfur

Materials and Conditions to Avoid:

Keep containers and liquids away from all potential sources of ignition.
Keep away from excess heat. Avoid contact with strong oxidizers, strong acids and strong bases.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product Information

LD50 (oral, rat): No Data Available

Acute Overexposure:

Mildly irritating to skin. Corrosive to eyes.
 Chronic Overexposure:
 Prolonged skin exposure can cause dermatitis. Repeated ingestion may cause an emia leading to effects on the liver, kidneys, spleen and testes.
 Ingredient information:
 Indazole Derivative is a possible mutagen. Laboratory experiments on Indazole Derivative have shown mutagenic effects (tested positive for histodines rever sion - ames test). May be mutogenic based on Pyrazolidone Derivative. Animal studies have shown that Pyrazolidone Derivative causes blood disorders, testicular damage and adv erse reproductive effects, such as infertility.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Data: No Data Available
 Chemical Fate Data: No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Hazardous Waste Characteristic:
 D001, D002
 Recommendation:
 Dispose of contaminated product, empty containers and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Discharge of processing effluent to the sewer may require a permit. DO NOT discharge effluent solutions to septic systems. Material, if spilled, may exhibit "flammable" and "corrosive" hazardous waste characteristics.

SECTION 14 - TRANSPORTATION INFORMATION

Domestic DOT Shipping Class: Flammable Liquid, N.O.S. (contains Acetic Acid)
 Hazard Class: 3.3
 UN Number: UN1993
 Packing Group: PGIII
 International Maritime Organization (IMO) Additional Shipping Codes:
 IMDG Code: IMDG 3345
 Amdt. Code: Amdt.27-94.
 HTS No.: HTS#3707.90.6000.8
 Product is labeled in accordance with US D.O.T. 49 CFR.

Passenger Aircraft Packing Instructions:
 None
 Further information:
 For further information, please call 800-323-2546

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:
 313 = SARA Title III Section 313 (40 CFR 372 -- Toxic Release Inventory)
 355 = SARA Title III Section 302 (40 CFR 355 -- Extremely Hazardous Substance)
 302 = SARA Title III Section 304 (40 CFR 302 -- Hazardous Substance List)
 CWA = Clean Water Act Priority Pollutants List
 CAA = Clean Air Act 1990 Hazardous Air Contaminants
 HAP = Clean Air Act - HON Rule - HAPs

Ingredients	CAS Number	313	355	302	CWA	CAA	HAP
Benzenepropanoic Acid Derivative	63684-32-2	N	N	N	N	N	N
Acetic Acid	64-19-7	N	N	Y	N	N	N
Diethylene Glycol	111-46-6	N	N	N	N	N	N

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Indazole Derivative	5401-94-5	N	N	N	N	N	N
Pyrazolidinone Derivative	92-43-3	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

TSCA 12(b) Export Notification

CAS NUMBER	CHEMICAL NAME
107-21-1	ETHYLENE GLYCOL

TOXICITY INFORMATION:

IRC1 = IARC Group 1 Human Carcinogens List
 IRC2 = IARC Group 2 Human Carcinogens List (limited human data)
 IRC3 = IARC Group 2B Human Carcinogens List (sufficient animal data)
 NTP = NTP Known Carcinogens List
 OSHA = OSHA Known Carcinogens List

Ingredients	CAS Number	IRC1	IRC2	IRC3	NTP	OSHA
Benzenepropanoic Acid Derivative	63684-32-2	N	N	N	N	N
Acetic Acid	64-19-7	N	N	N	N	N
Diethylene Glycol	111-46-6	N	N	N	N	N
Indazole Derivative	5401-94-5	N	N	N	N	N
Pyrazolidinone Derivative	92-43-3	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N

STATE REGULATIONS:

FL = Florida Hazardous Substance List MA = Massachusetts Right-To-Know List
 MI = Michigan Critical Materials List MN = Minnesota Hazardous Substance List
 NJ = New Jersey Right-To-Know List PA = Pennsylvania Right-To-Know List

Ingredients	CAS Number	PA	NJ	MN	MI	MA	FL
Benzenepropanoic Acid Derivative	63684-32-2	N	N	N	N	N	N
Acetic Acid	64-19-7	Y	Y	Y	N	Y	Y
Diethylene Glycol	111-46-6	Y	N	Y	N	N	N
Indazole Derivative	5401-94-5	N	N	N	N	N	N
Pyrazolidinone Derivative	92-43-3	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

SECTION 16 - OTHER INFORMATION

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.