a member of the Roche Group

Material Safety Data Sheet

Material Name: Ventana anti-Her2 (4B5) Rabbit Monoclonal Primary Antibody **MSDS ID: VEN-115**

* * * Section 1 - Chemical Product and Company Identification* * *

Manufacturer Information

VENTANA MEDICAL SYSTEMS INC.
1910 E. Innovation Park Drive
Tucson, AZ 85755
Phone: (520) 887-2155

EMERGENCY TELEPHONE NUMBER:
(800) 424-9300 (USA/Canada)
CHEMTREC: +1 (703) 527-3887 (International)

Material Name: Ventana anti-Her2 (4B5) Rabbit Monoclonal Primary Antibody

Product Number(s)

790-4493

Product Use

clinical/research

* * * Section 2 - Hazards Identification* * *

NFPA Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Preparation

This material is not classified.

EMERGENCY OVERVIEW

Physical Form: liquid
Major Health Hazards: No significant target effects reported.

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Skin

Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Eye

Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Ingestion

Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

OSHA Regulatory Status

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

* * * Section 3 - Composition/Information on Ingredients* * *

CAS #	Component / EU Number	Percent	Symbol(s)	Risk Phrase(s)
Not Available	Non-hazardous	60-100	---	---
7647-14-5	Sodium chloride 231-598-3	<1	Xi	R:36
6381-92-6	Ethylenediaminetetraacetic acid, disodium salt, dihydrate	<1	Xi	R:36
9002-92-0	BRIJ 35 500-002-6	<1	---	---

77-86-1	Tris(hydroxymethyl)aminomethane 201-064-4	<1	Xi	R:36-37-38
1310-73-2	Sodium hydroxide 215-185-5	<0.1	C	R:35
26628-22-8	Sodium azide 247-852-1	<0.1	T+ N	R:28-32-50/53
7647-01-0	Hydrogen chloride 231-595-7	<0.01	C	R:34-37

* * * Section 4 - First Aid Measures* * *

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Get medical attention, if needed.

Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion

If a large amount is swallowed, get medical attention.

* * * Section 5 - Fire-Fighting Measures* * *

See Section 9 for Flammability Properties

Flammable Properties

Slight fire hazard.

Extinguishing Media

regular dry chemical, carbon dioxide, regular foam, water

Unsuitable Extinguishing Media

None known.

Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

Hazardous Combustion Products

Thermal decomposition or combustion products: oxides of carbon, oxides of nitrogen, oxides of sodium

Sensitivity to Mechanical Impact

Not sensitive

Sensitivity to Static Discharge

Not sensitive

* * * Section 6 - Accidental Release Measures* * *

Occupational Spill/Release

Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

* * * Section 7 - Handling and Storage* * *

Handling Procedures

Wash thoroughly after handling.

Storage Procedures

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

* * * Section 8 - Exposure Controls/Personal Protection* * *

Exposure Limits

Sodium hydroxide (1310-73-2)

ACGIH:	2 mg/m3 Ceiling
NIOSH:	2 mg/m3 Ceiling
	10 mg/m3 IDLH
OSHA:	2 mg/m3 Ceiling
	2 mg/m3 TWA
Austria:	4 mg/m3 STEL (inhalable fraction, 8 X 5 min)
	2 mg/m3 MAK (inhalable fraction)
Denmark:	2 mg/m3 Ceiling
Finland:	2 mg/m3 STEL
	2 mg/m3 Ceiling
France:	2 mg/m3 VME
Greece:	2 mg/m3 STEL
	2 mg/m3 TWA
Ireland:	2 mg/m3 STEL
Japan	2 mg/m3 Ceiling
Portugal:	2 mg/m3 Ceiling
Spain:	2 mg/m3 VLA-EC
Sweden:	1 mg/m3 LLV (inhalable dust)
	2 mg/m3 CLV (inhalable dust)
United Kingdom:	2 mg/m3 STEL

Sodium azide (26628-22-8)

ACGIH:	0.29 mg/m3 Ceiling (as NaN3); 0.11 ppm Ceiling (as Hydrazoic acid, vapor)
NIOSH:	0.1 ppm Ceiling (as HN3); 0.3 mg/m3 Ceiling (as NaN3)
	Potential for dermal absorption
OSHA:	0.1 ppm Ceiling (as HN3); 0.3 mg/m3 Ceiling (as NaN3)
	Prevent or reduce skin absorption
EEC:	0.1 mg/m3 TWA
	0.3 mg/m3 STEL
	Possibility of significant uptake through the skin
Austria:	0.3 mg/m3 STEL (4 X 15 min)
	0.1 mg/m3 MAK
	skin notation
Belgium:	Skin
Denmark:	0.1 mg/m3 TWA
	Potential for cutaneous absorption
Finland:	0.3 mg/m3 STEL
	0.1 mg/m3 TWA
	Potential for cutaneous absorption
France:	0.3 mg/m3 VLCT (restrictive limit)
	0.1 mg/m3 VME (restrictive limit)
	Risk of cutaneous absorption
Germany:	0.2 mg/m3 TWA (exposure factor 2)
Germany (DFG):	0.2 mg/m3 MAK (inhalable fraction)
	0.4 mg/m3 Peak (inhalable fraction)
Greece:	0.1 ppm STEL; 0.3 mg/m3 STEL
	0.1 ppm TWA; 0.3 mg/m3 TWA
Ireland:	0.3 mg/m3 STEL (as NaN3)
	0.1 mg/m3 TWA (as NaN3)
	Potential for cutaneous absorption
Italy:	0.1 mg/m3 TWA
	skin - potential for cutaneous absorption
	0.3 mg/m3 STEL
Netherlands:	0.3 mg/m3 STEL
	0.1 mg/m3 TWA
	skin notation
Portugal:	0.29 mg/m3 Ceiling (as NaN3); 0.11 ppm Ceiling (as Hydrazoic acid, vapor)

Spain:	0.3 mg/m3 VLA-EC
	0.1 mg/m3 VLA-ED (indicative limit value)
	skin - potential for cutaneous exposure
Sweden:	0.1 mg/m3 LLV
	0.3 mg/m3 STV
	Skin notation
United Kingdom:	0.3 mg/m3 STEL (as NaN3)
	0.1 mg/m3 TWA (as NaN3)
	Potential for cutaneous absorption

Hydrogen chloride (7647-01-0)

ACGIH:	2 ppm Ceiling
NIOSH:	5 ppm Ceiling; 7 mg/m3 Ceiling
	50 ppm IDLH
OSHA:	5 ppm Ceiling; 7 mg/m3 Ceiling
	5 ppm Ceiling; 7 mg/m3 Ceiling
EEC:	5 ppm TWA; 8 mg/m3 TWA
	10 ppm STEL; 15 mg/m3 STEL
Austria:	10 ppm STEL (8 X 5 min); 15 mg/m3 STEL (8 X 5 min)
	5 ppm MAK; 8 mg/m3 MAK
Belgium:	10 ppm STEL; 15 mg/m3 STEL
	5 ppm TWA; 8 mg/m3 TWA
Denmark:	5 ppm Ceiling; 7 mg/m3 Ceiling
Finland:	5 ppm STEL; 7.6 mg/m3 STEL (including solution)
France:	5 ppm VLCT (restrictive limit); 7.6 mg/m3 VLCT (restrictive limit)
Germany:	2 ppm TWA (exposure factor 2); 3 mg/m3 TWA (exposure factor 2)
Germany (DFG):	2 ppm MAK; 3.0 mg/m3 MAK
	4 ppm Peak; 6 mg/m3 Peak
Greece:	5 ppm STEL; 7 mg/m3 STEL
	5 ppm TWA; 7 mg/m3 TWA
Ireland:	10 ppm STEL; 15 mg/m3 STEL
	5 ppm TWA; 8 mg/m3 TWA
Italy:	5 ppm TWA; 8 mg/m3 TWA
	10 ppm STEL; 15 mg/m3 STEL
Japan	5 ppm Ceiling; 7.5 mg/m3 Ceiling
Netherlands:	15 mg/m3 STEL
	8 mg/m3 TWA
Portugal:	2 ppm Ceiling
Spain:	10 ppm VLA-EC; 15 mg/m3 VLA-EC
	5 ppm VLA-ED (indicative limit value); 7.6 mg/m3 VLA-ED (indicative limit value)
Sweden:	5 ppm CLV; 8 mg/m3 CLV
United Kingdom:	5 ppm STEL (aerosol mist and gas); 8 mg/m3 STEL (aerosol mist and gas)
	1 ppm TWA (aerosol mist and gas); 2 mg/m3 TWA (aerosol mist and gas)

Ventilation

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Safety glasses or goggles are recommended when there is a potential for eye contact. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

Lab coat or apron.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

No respirator is required under normal conditions of use.

* * * Section 9 - Physical and Chemical Properties* * *

Physical State:	Liquid	**Appearance:**	liquid
Physical Form:	liquid	**Odor:**	Not available
Odor Threshold:	Not available	**pH:**	7.45-7.55
Decomposition:	Not available	**Flash Point:**	not flammable
Evaporation Rate:	Not available	**LEL:**	Not available
UEL:	Not available	**Vapor Pressure:**	Not available
Vapor Density (air = 1):	Not available	**Density:**	1.016 g/mL
Water Solubility:	miscible	**Log KOW:**	Not available
Coeff. Water/Oil Dist.:	Not available	**Auto Ignition:**	Not available
Viscosity:	Not available	**Volatility:**	Not available

* * * Section 10 - Stability and Reactivity* * *

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Materials to Avoid

oxidizing materials

Decomposition Products

Thermal decomposition or combustion products: oxides of carbon, oxides of nitrogen, oxides of sodium

Possibility of Hazardous Reactions

Will not polymerize.

* * * Section 11 - Toxicological Information* * *

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Sodium chloride (7647-14-5)

Inhalation LC50 Rat >42 g/m3 1 h; Oral LD50 Rat 3 g/kg; Dermal LD50 Rabbit >10 g/kg

BRIJ 35 (9002-92-0)

Oral LD50 Rat 1 g/kg

Tris(hydroxymethyl)aminomethane (77-86-1)

Oral LD50 Rat 5900 mg/kg

Sodium hydroxide (1310-73-2)

Dermal LD50 Rabbit 1350 mg/kg

Sodium azide (26628-22-8)

Oral LD50 Rat 27 mg/kg; Dermal LD50 Rat 50 mg/kg; Dermal LD50 Rabbit 20 mg/kg

Hydrogen chloride (7647-01-0)

Inhalation LC50 Rat 3124 ppm 1 h; Oral LD50 Rat 700 mg/kg; Dermal LD50 Rabbit >5010 mg/kg

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Sodium chloride (7647-14-5)

Oral: 3000 mg/kg Oral Rat LD50

BRIJ 35 (9002-92-0)

Oral: 1 gm/kg Oral Rat LD50; 8600 mg/kg Oral Rat LD50; 8600 mg/kg Oral Rat LD50; 4150 mg/kg Oral Rat LD50

Tris(hydroxymethyl)aminomethane (77-86-1)

Oral: >3000 mg/kg Oral Rat LD50

Acute Toxicity Level

Sodium chloride (7647-14-5)

Moderately Toxic: ingestion

BRIJ 35 (9002-92-0)

Moderately Toxic: ingestion
Slightly Toxic: ingestion

Tris(hydroxymethyl)aminomethane (77-86-1)

Slightly Toxic: ingestion

Sodium hydroxide (1310-73-2)

Toxic: ingestion
Moderately Toxic: dermal absorption

Sodium azide (26628-22-8)

Highly Toxic: inhalation, dermal absorption, ingestion

Hydrogen chloride (7647-01-0)

Toxic: inhalation
Moderately Toxic: ingestion

Irritation/Corrosivity

RTECS Irritation

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Sodium chloride (7647-14-5)

100 mg/24 hour Eyes Rabbit moderate; 10 mg Eyes Rabbit moderate; 500 mg/24 hour Skin Rabbit mild

BRIJ 35 (9002-92-0)

6 mg/3 day(s) intermittent Skin Human moderate; 100 mg Eyes Rabbit; 10 mg Eyes Rabbit; 750 ug/24 hour Eyes Rabbit severe; 100 mg Skin Rabbit; 500 mg/24 hour Skin Rabbit mild; 75 mg/24 hour Skin Rabbit mild; 500 mg/24 hour Skin Rabbit moderate; 1 percent Skin Woman

Tris(hydroxymethyl)aminomethane (77-86-1)

25 percent Skin Rabbit moderate; 500 mg Skin Rabbit severe; 100 mg Skin Rat

Local Effects

Sodium chloride (7647-14-5)

Irritant: eye

Ethylenediaminetetraacetic acid, disodium salt, dihydrate (6381-92-6)

Irritant: eye

BRIJ 35 (9002-92-0)

Irritant: eye

Tris(hydroxymethyl)aminomethane (77-86-1)

Irritant: inhalation, skin, eye

Sodium hydroxide (1310-73-2)

Corrosive: inhalation, skin, eye, ingestion

Sodium azide (26628-22-8)

Irritant: inhalation, skin, eye

Hydrogen chloride (7647-01-0)

Corrosive: inhalation, skin, eye, ingestion

Target Organs

Sodium azide (26628-22-8)

blood

Carcinogenicity
Component Carcinogenicity
Sodium azide (26628-22-8)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
Portugal: A4 - Not Classifiable as a Human Carcinogen
Hydrogen chloride (7647-01-0)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 54 [1992] (Group 3 (not classifiable))
Portugal: A4 - Not Classifiable as a Human Carcinogen
Mutagenic
No data available for the mixture.
RTECS Mutagenic
The components of this material have been reviewed, and RTECS publishes data for one or more components.
Reproductive Effects
No data available for the mixture.
RTECS Reproductive Effects
The components of this material have been reviewed, and RTECS publishes data for one or more components.
Tumorigenic
No data available for the mixture.
RTECS Tumorigenic
The components of this material have been reviewed, and RTECS publishes data for one or more components.
Medical Conditions Aggravated by Exposure
None known.

* * * Section 12 - Ecological Information* * *

Component Analysis - Aquatic Toxicity
Sodium chloride (7647-14-5)
Fish: 96 Hr LC50 Lepomis macrochirus: 5560-6080 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 12946 mg/L [static]; 96 Hr LC50 Pimephales promelas: 6020-7070 mg/L [static]; 96 Hr LC50 Pimephales promelas: 7050 mg/L [semi-static]; 96 Hr LC50 Pimephales promelas: 6420-6700 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4747-7824 mg/L [flow-through]
Invertebrate: 48 Hr EC50 Daphnia magna: 1000 mg/L; 48 Hr EC50 Daphnia magna: 340.7 - 469.2 mg/L [Static]
Sodium hydroxide (1310-73-2)
Fish: 96 Hr LC50 Oncorhynchus mykiss: 45.4 mg/L [static]
Sodium azide (26628-22-8)
Fish: 96 Hr LC50 Oncorhynchus mykiss: 0.8 mg/L; 96 Hr LC50 Lepomis macrochirus: 0.7 mg/L; 96 Hr LC50 Pimephales promelas: 5.46 mg/L [flow-through]
Hydrogen chloride (7647-01-0)
Fish: 96 Hr LC50 Gambusia affinis: 282 mg/L [static]
Mobility
No data available for the mixture.
Persistence & Degradation
No data available for the mixture.
Bioaccumulative Potential
No data available for the mixture.

* * * Section 13 - Disposal Considerations* * *

Disposal Methods
Dispose in accordance with all applicable regulations.
Component Waste Numbers
Sodium azide (26628-22-8)
RCRA: waste number P105

* * * Section 14 - Transport Information* * *

US DOT Information

Not regulated.

TDG Information

Not regulated.

ADR Information

Not regulated.

RID Information

Not regulated.

IATA Information

Not regulated.

ICAO Information

Not regulated.

IMDG Information

Not regulated.

* * * Section 15 - Regulatory Information* * *

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Sodium hydroxide (1310-73-2)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Sodium azide (26628-22-8)

SARA 302/304: 500 lb TPQ (This material is a reactive solid. The TPQ does not default to 10000 pounds for non-powder, non-molten, non-solution form)
1000 lb EPCRA RQ

SARA 313: 1.0 % de minimis concentration

CERCLA: 1000 lb final RQ; 454 kg final RQ

Hydrogen chloride (7647-01-0)

SARA 302/304: 500 lb TPQ (gas only)
5000 lb EPCRA RQ (gas only)

SARA 313: 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

OSHA (safety): 5000 lb TQ; 5000 lb TQ (anhydrous)

SARA 311/312

Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactive:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component / EC Number	CAS	CA	MA	MN	NJ	PA	RI
Sodium hydroxide	1310-73-2	Yes	Yes	Yes	Yes	Yes	Yes
Sodium azide	26628-22-8	Yes	Yes	Yes	Yes	Yes	Yes
Hydrogen chloride	7647-01-0	Yes	Yes	Yes	Yes	Yes	Yes

California Proposition 65

Not regulated under California Proposition 65

Canadian Regulations

Canada WHMIS

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

BRIJ 35 (9002-92-0)

1 %

Sodium hydroxide (1310-73-2)

1 %

Sodium azide (26628-22-8)
1 %
Hydrogen chloride (7647-01-0)
1 %

WHMIS Classification

Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

European Regulations

This preparation has been classified for the European Union according to Annex VI Directives 67/548/EEC and 99/45/EC.

Germany Water Classification

Sodium chloride (7647-14-5)
ID Number 270, hazard class 1 - low hazard to waters
Ethylenediaminetetraacetic acid, disodium salt, dihydrate (6381-92-6)
ID Number 104, hazard class 2 - hazard to waters
BRIJ 35 (9002-92-0)
ID Number 670, hazard class 2 - hazard to waters
Tris(hydroxymethyl)aminomethane (77-86-1)
ID Number 4650, hazard class 2 - hazard to waters
Sodium hydroxide (1310-73-2)
ID Number 142, hazard class 1 - low hazard to waters (footnote 8)
Sodium azide (26628-22-8)
ID Number 636, hazard class 2 - hazard to waters
Hydrogen chloride (7647-01-0)
ID Number 238, hazard class 1 - low hazard to waters (footnote 8)

EU Marking and Labelling

This material is not classified.

Japanese Regulations

Japan Designated Chemical Substances (PRTR Law)

The following components are subject to reporting requirements as specified by the "Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management" and are included in the "Pollutant Release and Transfer Register (PRTR)" of designated chemicals.
BRIJ 35 (9002-92-0)
407 1 %
Sodium azide (26628-22-8)
11 1 %

Japan Poisonous and Deleterious Substances

The following components are specified as poisonous and deleterious substances, and are regulated by Japan under the Poisonous and Deleterious Substances Control Law.
Sodium hydroxide (1310-73-2)
Deleterious, 5%; Deleterious
Sodium azide (26628-22-8)
Poisonous, 0.1%
Hydrogen chloride (7647-01-0)
Deleterious, 10%; Deleterious; Deleterious

Industrial Safety and Health Law - Flammable Materials

The following components are identified in Table 6-2 of the Enforcement Order of the Industrial Safety and Health Law which, if used in the workplace, require designation of an Operations Chief during confined space work and periodic machine inspections.
Sodium azide (26628-22-8)
Explosive substance

Industrial Safety and Health Law - Label Disclosure

No components of this material are specifically required to be indicated on a container label as specified by Article 18 of the Enforcement Order of the Industrial Safety and Health Law.

Industrial Safety and Health Law - Organic Solvents

No components of this material are specifically identified in Table 6-2 of the Enforcement Order of the Industrial Safety and Health Law which, if used in the workplace, require designation of an Operations Chief during confined space work and periodic machine inspections.

* * * Section 16 - Other Information* * *

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Full text of R phrases in Section 3

R28 Very toxic if swallowed.
R32 Contact with acids liberates very toxic gas.
R34 Causes burns.
R35 Causes severe burns.
R36 Irritating to eyes.
R37 Irritating to respiratory system.
R38 Irritating to skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Other Information

Limitations: The information and recommendations set forth in this MSDS are believed to be correct as of this date. Ventana Medical Systems, Inc. makes no warranty with respect to the content of this MSDS and disclaims all liability from reliance thereon.

New MSDS: 3/24/2011

End of Sheet VEN-115