

SAFETY DATA SHEET

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	RUO LZ-SAA Calibrator EIKEN
Product code	V-SZ12
Recommended Use and Restrictions on Use	For research use only
Supplier Name:	Eiken Chemical Co., Ltd.
Address:	4-19-9 Taito, Taito-ku, Tokyo 110-8408 JAPAN
Telephone number:	+81-3-5846-3479 (8:45–17:30 JST on WEEKDAY)
Telefax number:	+81-3-5846-3490

Section 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3) (Category 2)
 Reproductive toxicity – Fertility (Category 1B) (Category 1A)
 Reproductive toxicity - Unborn Child (Category 1B) (Category 1A)
 Acute toxicity, dermal (Category 4) +
 Acute toxicity, Oral (Category 4)
 Acute toxicity, Inhalation (Category 4)
 Skin irritation (Category 2)
 Skin corrosion (Category 2) (Category 1B)
 Skin sensitisation (Category 1)
 Eye irritation (Category 2)
 Serious eye damage/eye irritation (Category 2B) (Category 2A)
 Specific target organ toxicity (single exposure) (Category 1) (Category 3)
 Specific target organ toxicity (repeated exposure) (Category 1) (Category 2)
 Carcinogenicity (Category 1A)
 Short-term (acute) aquatic hazard (Category 1)
 Long-term (chronic) aquatic hazard (Category 1)

Label Elements

Pictograms



Signal Words

Danger

Hazard Statements

H226	Flammable liquid and vapour.
H225	Highly flammable liquid and vapour
H360F	May damage fertility.
H360D	May damage the unborn child.
H302+ H332	Harmful if swallowed or if inhaled
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

	H335+H336	May cause respiratory irritation or May cause drowsiness or dizziness
	H350	May cause cancer
	H370+H372	Causes damage to organs
	H373	May cause damage to organs
	H400	Very toxic to aquatic life
	H410	Very toxic to aquatic life with long lasting effects
Precautionary Statements		
General	P201	Obtain special instructions before use.
Prevention	P210	Keep away from heat, sparks, open flames or hot surfaces. – No smoking.
	P280	Wear protective gloves, protective clothing, eye protection, face protection.
	P240	Ground/bond container and receiving equipment.
	P241	Use explosion-proof electrical/ventilating/lighting/.../equipment
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
	P270	Do not eat, drink or smoke when using this product.
	P260 P273	Do not breathe dust/fume/gas/mist/vapours/spray. Avoid release to the environment.
Response	P308 + P313	IF exposed or concerned: Get medical advice / attention.
	P308 + P311	IF exposed or concerned: Call a POISON CENTER / doctor.
	P301 + P312 + P330 + P331	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.
	P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/ attention.
	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
	P391	Collect spillage.
Disposal considerations	P501	Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Supplemental Hazard Statements	None	
Other Hazards	None	

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture	Mixture			
Composition	RUO LZ-SAA Calibrator EIKEN	1 mL x 6, 6 concentrations		
	Hazard substances	2-Methoxyethanol 20.0%		
		Guanidinium chloride 9.6% (1.0 M)		
		Ethanol 2.7%		
		ProClin300 0.1%		
Information on Chemical Properties				
Hazardous ingredients (Common names and synonyms)	2-Methoxyethanol	Guanidinium chloride Guanidine hydrochloride	Ethanol	ProClin300
Chemical Formula	CH ₃ OCH ₂ CH ₂ OH	CH ₅ N ₃ ·HCl	C ₂ H ₅ OH	-
CAS No.	109-86-4	50-01-1	64-17-5	55965-84-9
Other identifiers	EC No.: 203-713-7	EC No.: 200-002-3	EC No.: 200-578-6	-

Section 4: FIRST-AID MEASURES

Inhalation	Move the victim to fresh air. Rest in a comfortably breathing position. Consult a physician.
Eye Contact	IF IN EYES: Wash with plenty of water immediately for at least 15 minutes. Consult a physician.
Skin Contact	IF IN SKIN: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
Ingestion	IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Anticipated Acute Effects and Delayed Effects	No data available
Most important Symptoms/Effects	See Section 2 Hazard statements and Section 11

Section 5: FIRE-FIGHTING MEASURES

Extinguishing Media	Water spray, powder, CO ₂ , foam
Prohibited Extinguishing	Not applicable
Specific Hazards arising from the Substance or Mixture	Carbon oxides, nitrogen oxides (NO _x), Hydrogen chloride gas
Special Protective Actions for Firefighters	Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, Emergency Procedures	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove ignition sources.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for Cleaning Up	Wipe up the solution with disposal without creating dust. Keep in suitable, closed containers for disposal.
Reference to Other Section	For disposal, see section 13.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling	Avoid contact with high temperature objects, spark, and strong oxidizing agents. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid inhalation of vapor or mist. Keep away from sources of ignition.
Conditions for Safe Storage, Including Any Incompatibilities	Store at 2-8 °C. Keep container tightly closed in a dry and well-ventilated place. Do not freeze.
Specific End Use(s)	No data available

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters	Components with workplace control parameters: no data available.
Exposure Controls	
Engineering measures	Use at a laboratory with facilities for washing body and eyes.
Personal protective equipment	Use personal protective equipment to avoid contact with eyes, mouth, skin, and clothing respond to situations.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Color	Clear and colorless
Physical state	Liquid, odorless.
pH	5.4-5.6
Melting point/ Freezing Point	No data available
Boiling Point/ Initial Boiling Point / Boiling Range	(2-Methoxyethanol) 124 °C (Ethanol) 78 °C
Flash Point	(2-Methoxyethanol) 40 °C (Ethanol) 13 °C
Flammability Range/ Explosive range	No data available
Vapor pressure	(2-Methoxyethanol) 8.3 hPa at 20 °C (Ethanol) 53.3 hPa
Vapor density	No data available
Specific gravity Relative Density	No data available
Solubility n-Octanol/ Water partition coefficient	No data available
Spontaneous Ignition Temperature	No data available
Decomposition Temperature	No data available
Odor Threshold	No data available
Evaporation Rate	No data available

Solubility	Water soluble
Flammability	No data available

Section 10: STABILITY AND REACTIVITY

Reactivity	No data available
Stability	Stable until expiry date under recommended conditions.
Hazardous Reaction Possibility	No data available
Conditions to Avoid	Extremes of temperature and direct sunlight, Moisture, Heat, flames, static electricity, spark.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Substances	In the event of fire: see section 5

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity	<p>2-Methoxyethanol LD50 Oral - Rat – 2,370–5,490 mg/kg LC50 Inhalation - Rat - 7 h–1,478 ppm LD50 Dermal - Rabbit – 1,280–3,920 mg/kg</p> <p>Guanidinium chloride LD50 Oral - Rat - 475 mg/kg LC50 Inhalation - Rat – 5,319 mg/l LD50 Dermal - Rabbit – > 2,000 mg/kg</p> <p>Ethanol LD50 Oral - Rat – 6,200 mg/kg LC50 Inhalation - Rat – 4h–63,000 ppmV LD50 Dermal - Rabbit – 20,000 mg/kg</p> <p>ProClin300 LD50 Oral - Rat – 862 mg/kg LC50 Inhalation - No data available LD50 Dermal - Rabbit – 2,800 mg/kg</p>
Skin Corrosion/ Irritation	<p>2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 Skin – Rabbit - Corrosive</p>
Serious Eye Damage/ Irritation	<p>2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 Eyes – Rabbit – Corrosive to eyes</p>
Respiratory Sensitization/ Skin Sensitization	<p>2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 Guinea pig – May cause sensitisation by skin contact.</p>
Germ Cell Mutagenicity	2-Methoxyethanol, Guanidinium chloride, Ethanol

	Based on the NITE GHS classification results.
	ProClin300 No data available
Carcinogenicity	ProClin300 No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results.
Reproductive Toxicity	2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 No data available
Specific target organ/ Systemic toxicity(Single Exposure)	2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 No data available
Specific target organ/ Systemic toxicity(Repeated Exposure)	2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 No data available
Aspiration Hazard	2-Methoxyethanol, Guanidinium chloride, Ethanol Based on the NITE GHS classification results. ProClin300 No data available
Additional Information	Guanidinium chloride RTECS: MF4300000 2-Methoxyethanol, ProClin300, Ethanol RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: ECOLOGICAL INFORMATION

Toxicity	2-Methoxyethanol Toxicity to fish LC50 (Oryzias latipes) - > 88.9 mg/L-96 h Toxicity to algae / aquatic plants ErC50 (Pseudokirchneriella subcapitata) – 93.2 mg/L-72 h Toxicity to crustacea EC50 (Daphnia magna) - > 84.8 mg/L-48 h Guanidinium chloride Toxicity to fish LC50 (Leuciscus idus) – 1,758 mg/l Ethanol Toxicity to fish LC50 (Oncorhynchus mykiss) – 11,200 ppm-96h Toxicity to algae / aquatic plants EC50 (Chlorella alga) – 1,000 mg/L-96 h Toxicity to crustacea EC50 (Daphnia magna) - > 5,463 mg/L-48 h
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	ProClin300 No data available
Persistence and Degradability	2-Methoxyethanol Degree of decomposition 74–94% by BOD Guanidinium chloride Degree of decomposition 0% by BOD Ethanol Degree of decomposition 89% by BOD ProClin300 No data available
Bioaccumulative Potential	No data available
Mobility in Soil	No data available
Results of PBT and VPVB Assessment	No data available
Other Adverse Effects	2-Methoxyethanol, Guanidinium chloride, Ethanol No data available ProClin300 Very toxic to aquatic life with long lasting effects.

Section 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods	Product Dispose in a safe manner in accordance with local disposal regulations.
	Contaminated Containers and Packaging Dispose the package of the product in accordance with local disposal regulations.

Section 14: TRANSPORT INFORMATION

UN Number	2-Methoxyethanol : 1188
UN Proper Shipping Name	2-Methoxyethanol ADR/RID: ETHYLENE GLYCOL MONOMETHYL ETHER IMDG: ETHYLENE GLYCOL MONOMETHYL ETHER IATA: Ethylene glycol monomethyl ether
Transport Hazard Class	2-Methoxyethanol : 3
Packaging Group	2-Methoxyethanol : III
Limited Quantity	2-Methoxyethanol ADR/RID: 5 L IMDG: 5 L IATA: 10 L

Section 15: REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture	Not applicable
Chemical Safety Assessment	No data available

Section 16: OTHER INFORMATION

The above information is provided based on our best knowledge and information at the date of its publication. It does not represent any guarantee of this product. In case of special handling, carry out safety measures as appropriate for the application and method of use before attempting to use the substance with user's own responsibility. Eiken Chemical shall not be held liable for any damage from use of this information or from use of this product.