

MATERIAL SAFETY DATA SHEET

ACCORDING TO DIRECTIVE

91/155/EEG-2001/58/EC

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Identification of the substance / preparation:

BUFFER SOLUTION FOR SODIUM SENSOR

Use of the substance / preparation: Electrolyte for pNa sensors

Company identification: Yokogawa Europe BV Databankweg 20 3821 AL Amersfoort The Netherlands
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Content	Formula	symbol letters	R phrases	EINECS nr.	CAS nr.
Sodium Chloride	<5%	NaCl	n.a.	n.a.	231-598-3	7647-14-5
Potassium Chloride	<5%	KCl	n.a.	n.a.	231-211-8	7447-40-7
Potassium diHydrogen Phosphate	<5%	KH ₂ PO ₄	n.a.	n.a.	231-913-4	7778-77-0
Potassium Hydroxide	0.5%	KOH	C	22, 35	215-181-3	1310-58-3
Ethylene glycol	20%	HOC ₂ H ₄ OH	X _n	22	203-473-3	107-21-1
Silver Chloride	<0.01%	AgCl	n.a.	n.a.	232-033-3	7783-90-6
Methyl Orange Sodium salt	0.002%	C ₁₄ H ₁₄ N ₃ NaO ₃ S	T	25	208-925-3	547-58-0
Thymol	<0.01%	2-[(CH ₃) ₂ CH]C ₆ H ₃ -5-(CH ₃)OH	X _n , C, N.	22, 34, 51/53	201-944-8	89-83-8

3. HAZARDS IDENTIFICATION

No specific hazards are identified since material is contained in sensor.

Danger classification: Potential hazards only occur by breakage of the electrode.

Hazards to man and the environment: Take care to prevent cuts and/or injury due to broken glass.

4. FIRST AID MEASURES

- After inhalation: Supply fresh air; consult doctor in case of symptoms.
- After skin contact: Instantly wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- After swallowing: Rinse out mouth

****Do not induce vomiting; instantly call for medical help.**

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Water, alcohol resistant foam.
Combustion products, resulting gases: KCl-solutions are not combustible.
Protective equipment: No special measures required.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions: Avoid contact with skin and eyes.
Methods for cleaning up: Take up with liquid absorbing material. Forward for disposal, rinse or clean with water.

7. HANDLING AND STORAGE

No specific instructions are required since material is contained in sensor.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

No specific requirements are applicable since material is contained in sensor.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance:	Liquid
Color	Yellow/Orange

9.2. Important health, safety and environmental information

pH	6-7
Solubility in water	soluble
Viscosity	water-like

10. STABILITY AND REACTIVITY

Conditions to avoid:	No particular information available.
Materials to avoid:	Reacts with oxidizing agents.
Hazardous decomposition products:	None.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Acute toxicity of pure 100% ethylene glycol: LD50 (oral, rat): 4700 mg/kg, LDLo (oral, human) 786mg/kg
Primary effect on the skin	Possible irritation, redness
Primary effect on the eye:	Possible irritation, redness, pain.
After swallowing:	Swallowing large amounts may result in nausea, vomiting.
Additional toxicological information:	When used and handled according to specifications, the product does not have any harmful effects.

12. ECOLOGICAL INFORMATION

No ecological problems are to be expected when the product is handled and used with due care and attention.

13. DISPOSAL CONSIDERATIONS

Dispose contaminated wipes, absorbing materials and residual product material according to regulations.

14. TRANSPORT INFORMATION

Non-hazardous material. Not subject to transport regulations.

15. REGULATORY INFORMATION

Danger classification: Not applicable.

List of relevant Risk phrases: Not applicable.

List of relevant Safety phrases: Not applicable.

Designation according to EC guidelines:

The material is not subject to classification according to EC lists and other sources of literature known to us.

Observe the normal safety regulations when handling chemicals.

16. OTHER INFORMATION

The above information is based on the present state of knowledge and is believed to be correct. Its purpose is to characterize the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. The material safety data sheets will be available in other languages on our website.

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