



## HYDRAZINE TEST KIT™

### DESCRIPTION

**HYDRAZINE TEST KIT** is used for the determination of Hydrazine content in the Boiler's Water. The test must be performed when in the vessel's Boiler Water Treatment program **MARZINE PLUS** is used. This is an activated hydrazine solution (Hydrazine with a catalyst for faster reaction with Dissolved Oxygen,) and applied for marine and industrial Boilers in low, medium and high pressures.

### TEST KIT CONTENTS

Contents of the **HYDRAZINE TEST KIT** are sufficient for 130 test with a measurement range of 0.05-0.40mg/l  $N_2H_4$

### ACCESSORIES

- 2 Screw-plug measuring glasses with a ring of 5ml
- 1 Slide Comparator
- 1 Color Chart
- 1 Plastic Syringe of 5ml

### REAGENTS

- 1 bottle of 30ml  $N_2H_4$  - 1
- 1 bottle of 27ml  $N_2H_4$  - 2

### PACKAGING

- Order Number : 700114
- Container : Plastic case

### TESTING PROCEDURE

#### Pre-treatment

Before testing, samples must be cooled to 25°C by passing them through a cooler.

1. Take a characteristic sample from the boiler's water and cool it to a temperature of 20°C -25°C, if necessary. Turbid samples are to be filtered with a filter paper.
2. Pour 5ml water sample into each of the measuring glasses using the plastic syringe and place a measuring glass on position A in the comparator. Only add the reagents to measuring glass B.
3. Add 5 drops of  $N_2H_4$  - 1 seal the glass and mix thoroughly.
4. Add 5 drops of  $N_2H_4$  - 2 seal the glass and mix thoroughly.



5. Open the glass after 5 min and place it on the position B in the comparator.
6. Slide the comparator until the colors match in the inspection hole on the top. Check the measurement reading in the recess on the comparator reed. Mid values can be estimated
7. After use, rinse out both measuring glasses thoroughly and seal them.

#### Interferences

Strictly observe the temperature and reaction time since they strongly affect the color intensity. The measurement must be taken in 5 min and not before or later, and preferably at the temperature of 20°C - 25°C.

### EVALUATION OF THE TEST RESULTS

Following the procedure above, the concentration in ppm of Hydrazine in the Boiler Water will be obtained. According to the Boiler's working conditions, and the results obtained the dosage of Marzine Plus must be adjusted considering the following chart. For effective boiler water treatment with Hydrazine and in order to avoid any problem of Oxygen corrosion, the test at the initial period of use of **MARZINE PLUS** must be performed every day. Once a small concentration of Hydrazine obtained in the Boiler water then the test could be repeated every 2-3 days.

### ADDITIONAL INFORMATION

Hydrazine or an alternative Oxygen Scavenger is very important to properly protect feed water and boiler components. However, precautions must be



taken to prevent overfeed of chemical as excess hydrazine will begin to decompose at temperature above 200°C to form Ammonia. This can interfere with supplemental amine compounds that are used for pH control in condensate system. Breakdown of excess hydrazine can raise ammonia concentration to levels that significantly increase copper alloy corrosion. After the test results are obtained they must be recorded in the Marichem Boiler Water Treatment Log Sheet. At the end of every

month, these Log Sheets should be submitted by the head engineer to the owner company, who in turn should send them to MARICHEM MARIGASES WORLDWIDE SERVICES for further evaluation and technical analysis.

For more information and literature concerning the **HYDRAZINE TEST KIT** measurements and the Boiler Water Treatment program you also may contact MARICHEM MARIGASES technical department.

**MARZINE-PLUS TESTING CHART**

Pressure Range	Hydrazine test result in ppm					Standard ppm of Hydrazine
	0-0.05	0.05-0.10	0.10-0.15	0.15-0.20	>0.20	
0-40 bar (low pressure boiler)	Increase dosage by 25%	Increase dosage by 25%	Satisfactory	Satisfactory	Decrease dosage by 25%	0.10-0.20
41-60 bar (medium pressure boiler)	Increase dosage by 25%	Increase dosage by 25%	Satisfactory	Decrease dosage by 25%	Decrease dosage by 25%	0.10-0.15
>60 bar (high pressure boiler)	Increase dosage by 25%	Satisfactory	Decrease dosage by 25%	Decrease dosage by 25%	Decrease dosage by 25%	0.05-0.10

**Read the Material Safety Data Sheet before using this product.**

*For detailed information on safety and health, please refer to Material Safety Data Sheet and/or Product Label.*

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