

# HANDLING AND DILUTION PROCEDURE

To achieve optimal performance of **RED<sup>X</sup>**

**RED<sup>X</sup>**

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# 01 \ INTRODUCTION

The purpose of this document is to provide detailed guidelines for the safe and effective dilution and handling of RED<sup>x</sup>. It aims to ensure consistency, safety, and accuracy in the preparation of RED<sup>x</sup> solutions.

Watch Water RED<sup>x</sup> is an effective Iron-based precipitant that is used in the treatment of drinking, process and wastewater treatment.

This document applies to all laboratory personnel, technicians, and staff involved in the preparation, handling, storage, and disposal of RED<sup>x</sup> solutions. It covers safety protocols, equipment requirements, procedural steps, and emergency measures.

# 02 \ PHYSICAL PROPERTIES

Active substances	approx. 195 g Fe/kg
Fe (Total)	19-20%
Form	Granules
Solubility	350 g/l
pH (1%)	2
pH (5%)	3
Insoluble content	<1%

*\*These properties are provided as general information only. They are approximate values and are not considered part of the product specifications*

# 03 \ MATERIALS AND EQUIPMENT

## List of Materials

- RED<sup>x</sup> - Granules
- Distilled or deionized water
- Other chemicals (e.g., acid or base for pH adjustment, if necessary)

## List of Equipment

- Beakers, flasks, or appropriate dilution containers
- Stirring devices (magnetic stirrer, glass rod, industrial agitators for larger mixing)
- Measuring instruments (graduated cylinders, pipettes, balances)
- Safety equipment (fume hood, eyewash station, safety shower)

# 04 \ PREPARATION FOR DILUTION

## Site Preparation

- Ensure the workspace is clean, well-ventilated, and free of clutter.
- Verify that all necessary equipment and materials are available and in good working condition.
- Check the calibration of measuring instruments.

## Personal Preparation

- Wear appropriate PPE before handling ferrous sulfate.
- Review the Safety Data Sheet (SDS) for RED<sup>x</sup> to understand the hazards and safety measures.
- Ensure familiarity with the emergency procedures and location of safety equipment

## Dilution Procedures

### Step 1: Prepare container & Measure RED<sup>x</sup>

- Ensure the tank is thoroughly clean, free from any contaminants. Make sure to use clean water without additional impurities.
- Distilled or Deionized Water: Ensure you are using high-quality distilled or deionized water to avoid impurities that could contribute to turbidity.
- Make sure balance/scale are calibrated and weight RED<sup>x</sup> to desired amount and record weight accurately.

## Step 2: Proper Dissolution

- Pour a portion of the water into the dilution container and turn on mixer
- Gradual Addition: Add the RED<sup>x</sup> slowly to the water while mixing continuously to ensure complete dissolution. Gradually add RED<sup>x</sup> to water while stirring to prevent clumping.
- Temperature Control: Dissolving the salt in slightly warm water (not hot) can help speed up the dissolution process.
- Ensure to have minimum of 30+ minutes of mixing time or even more until RED<sup>x</sup> is completely mixed.  
*Note: Insoluble content is < 1%*
- Solutions Usage: Make sure the mixer is always on while using the product for complete dilution before usage. Mixer should be on while using RED<sup>x</sup> solution for homogeneous solution.

## 05 \ HANDLING AND STORAGE

Watch Water® RED<sup>x</sup> is easy to handle and deliver in solid powder form. Dry products are hygroscopic and should be stored in a dry environment. When stored in humid environment, lumps can form and may have slight effects on the product's quality.

Store under dry Conditions.

Protect from heat and direct sunlight.

Storage temperature < 30° C

### Handling Procedures

Avoid direct contact with chemicals.

Use tools or equipment to handle it whenever possible.

Transfer solutions carefully to avoid spills.

Prevent contamination by keeping containers closed when not in use.

### Storage Conditions

Store solutions in tightly sealed, labeled containers.

Keep in a cool, dry, and well-ventilated area.

Avoid exposure to light and moisture which can degrade the compound.

Follow specific storage conditions as per the SDS.



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