

# **ASR 4408**

## ***Dechlorination Chemical***

### **PRODUCT DESCRIPTION AND APPLICATION**

is a fast-acting dechlorination agent used to reduce the levels of residual chlorine in chlorinated water supplies **ASR 4408** without increasing objectionable chloramines. **ASR 4408** is a bisulfite-based material that reacts instantaneously with chlorine. It does not include any catalyst and, therefore, reacts more slowly with oxygen.

Its primary use is dechlorination of water, feedwater for reverse osmosis (RO), feedwater to ion exchange units, and waste water. **ASR 4408** is also used for chlorine and oxygen scavenging in systems that cannot tolerate the presence of a catalyst.

### **PHYSICAL & CHEMICAL PROPERTIES**

These properties are typical. Refer to the Material Safety Data Sheet (MSDS), SECTION 9, for the most current data.

<b>Form:</b>	Liquid
<b>Density @77°F [25°C]:</b>	11.4 lb/gal [1.37 kg/L]
<b>Specific Gravity @77°F [25°C]:</b>	1.37
<b>Odor:</b>	Pungent sulfurous
<b>pH (1% Solution):</b>	4.1
<b>Freeze-Thaw Recovery:</b>	Unstable
<b>Flash Point (PMCC):</b>	None
<b>Crystallization Point:</b>	37°F [3°C]
<b>Freeze Point (precipitation point)</b>	30°F[-1°C]
<b>VOC</b>	None

### **ACTIVE CONSTITUENTS**

Sodium Bisulfite

### **REGULATORY APPROVALS**

Refer to the Material Safety Data Sheet (MSDS), SECTION 15 for the most recent information on approvals.

## MATERIALS OF COMPATIBILITY

Compatible	Not Compatible	Not Tested
Polyethylene	Aluminum	Plasite 4005
Fiberglass DK-411	Brass	Plasite 6000
PVC	Mild Steel	Plasite 7122
Buna-N	Nickel	Copper
Polypropylene	Neoprene	Polyurethane
Natural Rubber	Hypalon® elastomer	
Fluoropolymer	Stainless Steel 304	
Viton® synthetic rubber		
Plexiglas		
Vinyl		
Stainless Steel 316L*		

\* 316 SS is considered compatible. However, some corrosion may occur in the vapor region and at welds during long term storage of product in 316 SS at higher temperatures.

## DOSAGE AND FEEDING

### PRODUCT FEEDING AND PROGRAM COMPATIBILITY

**ASR 4408** should be fed at a point where thorough instantaneous mixing is available as close to the chlorine contact point as feasible. **ASR 4408** can be fed neat or diluted.

### CONSEQUENCES OF UNDERFEED

#### Dechlorination

Underfeed of **ASR 4408** will cause free chlorine to remain in the water going to the ion exchanger or reverse osmosis (RO) membrane. This chlorine will react with the resin or membrane structure causing degradation and/or hydrolysis (check manufacturing specifications).

#### Oxygen Scavenging

Underfeed of **ASR 4408** will result in serious oxygen corrosion to the feedwater system. The greatest damage will occur in the economizer or feedwater preheaters. Oxygen corrosion will also increase iron levels in the feedwater. Iron deposits will form in the high heat flux areas of the boiler causing tube failures.

### CONSEQUENCES OF OVERFEED

#### Dechlorination

Moderate overfeed of **ASR 4408** will cause no permanent damage to any part of the boiler feed system. It will exchange out on the ion exchange resin or be removed by the RO membrane and cause reduced run lengths that would be directly proportional to the extent of overfeed. Slight overfeed should have no noticeable effect on the operation of the ion exchangers or RO membranes since the vast majority of ionic load would be coming from the water itself.

## ENVIRONMENTAL AND TOXICITY DATA

Refer to the Material Safety Data Sheet (MSDS), SECTIONS 11 and 12, for the most current data.

## SAFETY AND HANDLING

Refer to the Material Safety Data Sheet (MSDS), SECTIONS 3 and 8, for the most current data.

**Caution:** May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally. In case of contact, wash skin with soap and water; for eyes, immediately flush with large amounts of water for at least 15 minutes, and get medical attention. Remove contaminated clothing and wash before re-use.

The maximum storage temperature is 120°F [49°C]. Keep from freezing. At temperatures below 30°F [-1°C], product will precipitate. **ASR 4408 is not freeze-thaw stable.** Bulk **ASR 4408** should be stored in lined or fiberglass tanks. Avoid excessive aeration. Fill bulk tanks from the bottom.

## STORAGE

**ASR 4408** has a maximum recommended in-plant **storage life of six months** in factory-sealed containers.

Refer to the Material Safety Data Sheet (MSDS), SECTION 7, for the most current data.

## REMARKS

If you need assistance or more information on this product, please call your nearest ASR Representative.

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