



## Technical Bulletin

# NuSolv™ 1000

## Barium Sulfate Scale Removal

### Background

Precipitate scaling of oilfield piping and equipment results in productivity losses, NORM concerns, and costly remediation operations. The constituents of the scaling are typically a mixture of carbonate and sulfate minerals. Of these, the barium sulfate scale is the most problematic.

The use of chelation chemicals is theoretically successful in the chemical dissolution of insoluble barium sulfate scale. However, the application of this science has resulted in inconsistent and failed performances.

### Alternative Approach

The Way, Incorporated has supplied solutions to barium sulfate scale problems for over 20 years. Our knowledge and experiences of cleaning chemistry mechanisms in various industries has provided an alternative approach to removing oilfield barium sulfate scaling.

NuSolv™ 1000 was formulated to provide effective removal of oilfield scaling using three chemical mechanisms:

- CHELATION

A synergistic blend of chelant agents are utilized to effectively complex the barium ions.

- SURFACTANTS

The surface active agents are utilized to penetrate the crystal matrix of the scale. Quite simply, without effective reactant contact the chemical reactions are not effective.

- CATALYSTS

The reaction of active ingredients with the barium sulfate is enhanced by these chemical molecules. These decrease the time necessary for the barium sulfate dissolution.

### Application

The application recommendations for NuSolv™ 1000 requires a survey of the problem. TWI personnel will assist in defining the success criteria.

### Chemistry

pH 12.1

Specific Gravity 1.47

Appearance: dark brown liquid, slightly viscous, mild chemical odor.

### HMIS Ratings

Health 2

Flammability 0

Reactivity 0

PPE: D

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### Precautionary Statements

Always wear proper protective equipment when using or working around these products. Consult the MSDS for safety information and handling precautions.

