

## Background

Compressed air is an essential part of many industrial processes, including fertilizer production. Fertilizer companies formulate a chemistry that provides nutrients necessary for vegetation to grow and thrive. The basic macronutrients needed for plant growth are nitrogen, phosphorus, potassium, magnesium, calcium and sulfur. The fertilizer products that deliver these essential elements are commercially available in both dry pellet and liquid forms.

While the effects of using fertilizer may be beneficial for plant life, the processes used to produce them can be detrimental to metal piping. Chemical dust and fumes, combined with humidity in the air may leave a thin chemical coating on surfaces within a facility that can wreak havoc on metal compressed air systems.

## Problem

A fertilizer company in Florida was experiencing corrosion of their compressed air piping system caused by this type of chemical coating created during production. They had tried replacing the pipe using different metals, including aluminum, but the issues continued. A better, more permanent solution was needed.

## Solution

Asahi/America's Air-Pro® piping system was proposed to handle this challenging application. Made from a specially formulated chemical resistant advanced polyethylene resin, Air-Pro® is designed specifically for compressed air applications.

With a pH resistance range from 1 – 14, and thermally fused non-mechanical joining system, Air-Pro® can provide many years of maintenance-free service in the harshest corrosive conditions.

The project consisted of several hundred feet of 2" and 1" pipe, fittings and valves. Long vertical and horizontal runs of pipe were butt fused together (no couplings needed). Most of the welding was performed on the ground and hoisted into place with some final tie-in field welds. The two installers did a great job and everything tested perfect upon completion. Another corrosion problem solved by Your Experts in Plastics at Asahi/America.

## Air-Pro® Advantage

- Low-cost maintenance and installation
- Leak-free performance
- Butt, socket or electrofusion joining methods
- Start-to-finish project assistance from specification, weld training and installation

## Ideal Applications

- Compressed air
- Underground/buried
- Corrosive environments
- Marine
- Vacuum
- Non-certified gas applications

## Other Asahi Pipe Offerings

Visit our website at [www.asahi-america.com](http://www.asahi-america.com) to view other piping systems options.

# Installation Photos

**Another  
Corrosion  
Problem  
Solved.™**

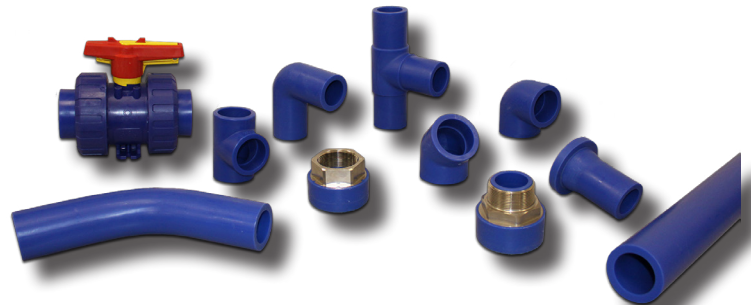
**ASAHI/AMERICA®**  
Your Experts in Plastics™



## Air-Pro<sup>®</sup> Compressed Air Piping System

### Features and Benefits

- Increased compressor efficiency due to low friction
- Thermal fusion is more reliable than welded, soldered or mechanical joints
- Lightweight materials reduce transportation costs
- Wide temperature range (-40° F to 140° F)
- Excellent chemical resistance
- High pressure capacity (230psi at 68° F)
- Ideally suited for horizontal directional drilling and underground buried applications
- Compatible with all compressor lubricants



## AIR-PRO<sup>®</sup>

### Compressed Air Piping

### Pipe and Fittings

- 20 - 110mm (1/2" - 4") SDR 7.4, 230psi
- 160 - 315mm (6" - 12") SDR 11, 150psi

### Valves

- Ball valves
- Tapping saddles

### Seals and O-Rings

- FKM

### Welding Methods



## Air-Pro<sup>®</sup> Compressed Air Piping System

Developed in 1992, Air-Pro<sup>®</sup> piping system has been installed with confidence for over 25 years in industries as varied as shipbuilding, hospitals and railroad yards. Air-Pro<sup>®</sup> revolutionized the use of thermoplastics for air transport. Unlike PVC systems, Air-Pro<sup>®</sup> meets the requirements set by California OSHA Unfired Pressure Vessel Safety Order 462 (m) (3).

Engineers and designers continue to exclusively specify Air-Pro<sup>®</sup> due to its reliability, large size range, ease-of-installation and low cost-of-ownership. Air-Pro<sup>®</sup> includes all necessary adapters to transition from existing, failing metal or ABS systems.

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