



MINI-BULK AND BULK SOLUTIONS

Introduction

USP Technologies (USP) offers many programs to assist with the safe storage, handling and use of hydrogen peroxide (H_2O_2) and other chemicals. USP programs and systems are recognized as being of the highest quality and are designed to the strictest of USP and chemical manufacturer standards. USP can provide mini-bulk chemical storage options ranging from 500 to 15,000 gallons with systems customized to usage patterns, space availability, terminal locations, etc. The objective is always providing the safest, most reliable and cost effective solution to customers.

Mini-Bulk Program

With this program, customers have transitioned from labor intensive and higher risk drum and tote handling programs to a hands-off, low risk mini-bulk program realizing the following benefits:

- Improved safety as personnel exposure is eliminated
- Reduced personnel costs associated with chemical management
- Equal or better chemical program costs
- Exemption from DHS registration

Bulk Program

USP also specializes in bulk chemical supply programs for higher usage applications or where logistics require freight optimization for full tank truck deliveries. For these locations USP offers tanks from 5,000 to 10,500 gallons in double wall configuration and up to 15,000 gallons in single wall designs.

Each tank, regardless of size, is designed and fabricated to strict USP standards that exceed those of the industry.

Mini-Bulk Drum / Tote Conversion

USP can convert your existing drum or tote program to our mini-bulk solution. This conversion is especially valued by those looking to eliminate the higher risk and labor intensive nature of their current drum or tote program. Our full-service program includes the following elements:

- Technical applications assistance
- System installation and commissioning
- System service and maintenance



Mini-bulk Program (Hydrogen peroxide with catalyst)



Bulk Program (USP-5000 with seismic option)

MINI-BULK AND BULK SOLUTIONS

- Turn-key equipment supply
- Chemical supply and inventory management
- Customized system engineering and design
- Modular design for ease of installation
 - Dosing module – 2-pump arrangement
 - Tank module – double walled
 - Control module – custom program capable

DHS Registration for Hydrogen Peroxide

The Department of Homeland Security (DHS) requires a facility pre-screen if more than 400 lbs. of hydrogen peroxide above 34.5% is stored on-site. The DHS further states, “the facility shall only consider theft/diversion chemicals of interest in transportation packaging as defined by 49 CFR 171.8” (drums, totes, unattended trailers and ISOtainers). By this clarification, fixed storage tanks (bulk and mini-bulk systems) do not require registration. However, USP insists that all our delivery locations be secured and exhibit restricted public access, regardless of DHS registration status.

Hydrogen Peroxide - Class 1 Oxidizer

For customers interested in using less hazardous materials, USP can provide H₂O₂ as a Class 1 Oxidizer (27%) or as a non-rated chemical (<8%). Other concentrations are available upon request.

System Engineering

USP bulk and mini-bulk systems are recognized as ‘best in class’ with over 20 years of demonstrated quality and reliability handling multiple chemicals. USP systems are modular in nature with each module fabricated and thoroughly tested prior to shipment.

SYSTEM MODULAR FEATURES

TANK MODULE	<ul style="list-style-type: none">▪ Double wall HDPE Tank with 110% secondary containment▪ Includes fill connection, outlet assembly, inverse level indicator, ultrasonic level indicator with local readout and an OSHA FRP ladder assembly (>3k)▪ Fittings and venting design per chemical application▪ Options include leak detection and seismic restraint
DOSING MODULE	<ul style="list-style-type: none">▪ Duplex dosing module with precision metering pumps, a power distribution panel, back pressure/anti-siphon valve, calibration cylinder, and pressure relief valves▪ Unit is mounted inside an environmental enclosure with integrated containment sump for leak control▪ Each unit designed for specific chemical application▪ Leak detection, seismic restraint and multiple dose point options available
CONTROL MODULE	<ul style="list-style-type: none">▪ The USP ChemWatch™ Advance Controller System (ACS) provides inventory management, customized dose control for chemical usage optimization as well as multiple system diagnostics and alarming options▪ Module operates with cellular or landline communications

Hydrogen Peroxide Storage and Safety

H₂O₂ stored and handled in a safe manner can be integrated into almost any environment. Under normal conditions and when properly stored, H₂O₂ is extremely stable. Compared to other widely used municipal and industrial chemicals, H₂O₂ has a lower hazard rating making it easy to integrate into existing and new facilities.

CHEMICAL	HEALTH	FLAMMABILITY	REACTIVITY
Ozone	4	0	3
Chlorine	4	0	2
Sodium Hypochlorite (12% - 15%)	2	0	1
Potassium Permanganate	3	0	2
H ₂ O ₂ (20% - 50%)	3	0	1

Using the proper materials of construction for all wetted surfaces that will come into contact with concentrated H₂O₂ is critical to insuring a trouble free application. Please contact us for more information regarding specific applications.

About USP Technologies

USP Technologies is the leading supplier of peroxygen-based technologies and services for environmental applications. We have been serving the water, wastewater and remediation markets for over 20 years and have offices and field service locations throughout North America. Our consultative approach to problem solving includes application assessment, technology selection and development of a tailored treatment approach. Our full service programs successfully integrate storage and dosing equipment systems, chemical supply, inventory and logistics management, and ongoing field and technical support. This approach provides cost-effective, “hands-off” solutions to our customers. USP Technologies also can provide access to experienced application partners for a turn-key program encompassing engineering, site characterization and technology selection, program implementation, execution and report generation.

Getting Started

We look forward to supporting your treatment needs, whatever the scale of your requirements. To obtain a streamlined treatment solution tailored to your specific project, give us a call at (877) 346-4262.

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