

# Breakthrough Rapid Neutraliser of Hazardous Chemical Spills and Vapours

## NO MORE CONFUSING RESPONSES

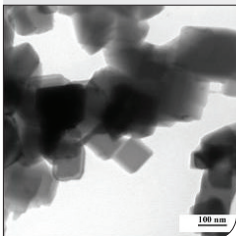
- NEUTRALISES TOXIC CHEMICAL LIQUIDS AND VAPOURS\*
- IDEAL SOLUTION FOR IMMEDIATE LABORATORY CHEMICAL SPILL RESPONSE
- WORKS ON ACIDS, CAUSTICS, TOXICS AND SOLVENTS\*
- EASY TO MAINTAIN AND USE
- NON-TOXIC
- NO LIMITED SHELF LIFE
- NO PRE-MIXING REQUIRED



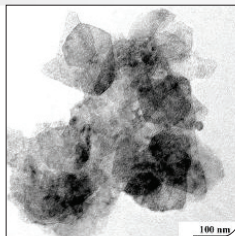
**FAST-ACT**

## TECHNOLOGY

FAST-ACT is a combination of common metal oxides ( $MgO + TiO_2$ ) with a unique morphology. It has nanomaterial properties with a final particle size of nearly  $5\mu m$ . The production process creates an altered, non-toxic molecular structure with large increase in porosity and surface area.



Standard  
MgO 30sqm/gm



FAST-ACT  
MgO 230sqm/gm



20 grams of NanoActive  
FAST-ACT has a surface  
area equivalent to a  
football field

## HOW DOES IT NEUTRALISE TOXIC CHEMICALS INCLUDING VAPOUR?

Nanomaterials by nature want to agglomerate and because the molecular structure of FAST-ACT is incomplete, it binds to any reactive substance using "ionic bonding". It uses the targeted chemical's ions to try and complete its own structure, as a result many hazardous chemicals are neutralised through a process now known as "destructive adsorption".

The large surface area with numerous corners and edges containing many unsaturated ions make it effective on liquids and vapours of hazardous compounds.

**FAST-ACT literally binds and destroys the contacted chemical with a resultant non-hazardous, neutralised by-product.**

HCl is converted to  $MgCl_2 + H_2O$   
HF is converted to  $MgF_2 + H_2O$

\* Refer to the Summary of Effectiveness over page

## FAST ACT WALL UNIT

includes 500g FastAct Shaker

- Ideal solution for immediate chemical spill response. Works on acids, caustics, toxics and solvents.
- Easy to operate portable delivery systems
- No premixing required
- No special training necessary
- Compact containers for easy storage

Order Code:  
**FA15-0500WALL**



## FAST ACT SHAKER BOTTLES

- Effective against toxic spills
- Easy to operate portable delivery systems
- No premixing required
- No special training necessary
- Compact containers for easy storage
- Safe and non-toxic, non-corrosive, and non-flammable
- Dry powder formulation
- Blend of earth minerals

Order Code:  
**FA15-0070** 70g  
**FA15-0300** 300g  
**FA15-0500** 500g



500g bottle to fit wall unit ▶

## FAST-ACT CYLINDER

- Effective against vapour hazards
- Easy to operate portable delivery systems
- No premixing required
- No special training necessary
- Safe and non-toxic, non-corrosive, and non-flammable
- Dry powder formulation
- Blend of earth minerals

Order Code:  
**FA15-1000** 1kg Cylinder  
**FA15-2000** 2kg Cylinder  
**FA15-4000** 4kg Cylinder



1kg cylinder ideal for most laboratory applications ▶

## SUMMARY OR EFFECTIVENESS

NEUTRALISATION		ADSORPTION		NOT EFFECTIVE ON
<b>Corrosive Materials</b>		<b>Liquid Solvent Spills</b>		
<p>Acids</p> <ul style="list-style-type: none"> <li>Inorganic and Organic</li> <li>Hydrochloric Acid</li> <li>Hydrofluoric Acid*</li> <li>Nitric Acid*</li> <li>Phosphoric Acid</li> <li>Sulfuric Acid*</li> <li>Acetic Acid</li> <li>Methanesulfonic Acid</li> <li>Ethanesulfonic Acid</li> <li>Benzenesulfonic Acid</li> <li>Toluenesulfonic Acid</li> </ul> <p>Phosphorus</p> <ul style="list-style-type: none"> <li>Pesticides</li> <li>Dimethyl Methylphosphonate</li> <li>Paraoxon</li> <li>Parathion*</li> </ul> <p>Sulfur</p> <ul style="list-style-type: none"> <li>2-Chloroethyl Ethyl Sulfide</li> <li>Methyl Mercaptan</li> </ul> <p>Phenols</p> <ul style="list-style-type: none"> <li>Nitrophenols</li> <li>Chlorophenols</li> </ul>	<p>Carbonyl Compounds</p> <ul style="list-style-type: none"> <li>Aldehydes*</li> <li>Ketones</li> <li>Carboxylic Acids</li> </ul> <p>Nitrogen Compounds</p> <ul style="list-style-type: none"> <li>Acetonitrile*</li> <li>Sodium Cyanide (aq)</li> <li>4-vinylpyridine</li> </ul> <p>Halogens/Halides</p> <ul style="list-style-type: none"> <li>Acetyl Chloride</li> <li>Chloroacetyl Chloride</li> <li>Chlorine</li> <li>Chloroform</li> <li>Hydrogen Bromide*</li> <li>Cyanogen Chloride</li> <li>Methylene Chloride</li> <li>Carbon Tetrachloride</li> <li>TCE, PCE</li> </ul> <p>Bis-(2-Chloroethyl) Sulfide</p> <p>Pinacoyl methylphospho-nofluoridate</p> <p>O-ethyl S-(2-diisopropylaminoethyl)methylphosphonothioate</p>	<p>Acidic and Caustic Gases</p> <ul style="list-style-type: none"> <li>Hydrogen Chloride</li> <li>Hydrogen Fluoride</li> <li>Hydrogen Bromide*</li> <li>NO<sub>x</sub>/N<sub>2</sub>O<sub>4</sub>*</li> <li>Sulfur Dioxide</li> <li>Hydrogen Sulfide*</li> <li>Diborane*</li> <li>Hydrogen Selenide*</li> <li>Phosphine*</li> <li>Ammonia</li> <li>Anhydrous Ammonia*</li> <li>Carbonyl Sulfide</li> <li>Hydrogen Cyanide*</li> </ul> <p>Chlorinated Organics</p> <ul style="list-style-type: none"> <li>Acetyl Chloride</li> <li>Chloroacetyl Chloride</li> <li>Chloroform</li> <li>Methylene Chloride</li> </ul> <p>Halogens</p> <ul style="list-style-type: none"> <li>Chlorine*</li> <li>Bromine</li> <li>Iodine</li> </ul> <p>Volatile Organics</p> <ul style="list-style-type: none"> <li>Methyl Mercaptan*</li> <li>Ethylene Oxide*</li> <li>Formaldehyde*</li> <li>Phosgene*</li> <li>Arsine*</li> </ul>	<ul style="list-style-type: none"> <li>Alcohols/Phenols</li> <li>Ethanol</li> <li>Methanol</li> <li>Allyl Alcohol*</li> <li>Nitrophenols</li> <li>Chlorophenols</li> </ul> <p>Caustics</p> <ul style="list-style-type: none"> <li>Metal Hydroxides (aq)</li> </ul> <p>Petrochemicals</p> <ul style="list-style-type: none"> <li>Diesel</li> <li>Gasoline</li> <li>Oils</li> </ul> <p>Others</p> <ul style="list-style-type: none"> <li>Acrylonitrile*</li> <li>Benzene</li> <li>Hydrazine*</li> <li>Toluene</li> <li>Acrolein*</li> <li>Methylhydrazine*</li> <li>Methylisocyanate*</li> </ul>	<ul style="list-style-type: none"> <li>Biologicals</li> <li>Bacteria</li> <li>Viruses</li> <li>Spores</li> </ul> <p>Nuclear</p> <p>Radiological</p> <p>Heavy Metals</p> <p>Solid Waste</p>

### LIQUID & VAPOUR CHEMICAL SPILLS AND RELEASES

Note: Depending on the amount of FAST-ACT used, various chemicals may undergo a combination of neutralization, absorption, and/or containment.

\* Denotes Top 27 Toxic Industrial Chemicals (USA CHPPM)