

# Breakthrough Rapid Neutraliser of Hazardous Chemical Spills and Vapours

## NO MORE CONFUSING RESPONSES

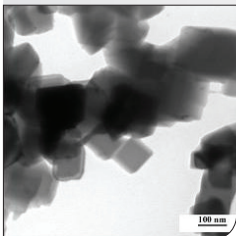
- NEUTRALISES TOXIC CHEMICAL LIQUIDS AND VAPOURS\*
- IDEAL SOLUTION FOR IMMEDIATE LABORATORY CHEMICAL SPILL RESPONSE
- WORKS ON ACIDS, CAUSTICS, TOXICS AND SOLVENTS\*
- EASY TO MAINTAIN AND USE
- NON-TOXIC
- NO LIMITED SHELF LIFE
- NO PRE-MIXING REQUIRED



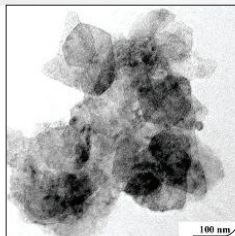
**FAST-ACT**

## 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 OF EFFECTIVENESS

### NEUTRALISATION

#### Corrosive Materials

##### Acids

Inorganic and Organic  
Hydrochloric Acid  
Hydrofluoric Acid\*  
Nitric Acid\*  
Phosphoric Acid  
Sulfuric Acid\*  
Acetic Acid  
Methanesulfonic Acid  
Ethanesulfonic Acid  
Benzenesulfonic Acid  
Toluenesulfonic Acid

##### Phosphorus

Pesticides  
Dimethyl Methylphosphonate  
Paraoxon  
Parathion\*

##### Sulfur

2-Chloroethyl Ethyl Sulfide  
Methyl Mercaptan

##### Phenols

Nitrophenols  
Chlorophenols

##### Carbonyl Compounds

Aldehydes\*  
Ketones  
Carboxylic Acids

##### Nitrogen Compounds

Acetonitrile\*  
Sodium Cyanide (aq)  
4-vinylpyridine

##### Halogens/Halides

Acetyl Chloride  
Chloroacetyl Chloride  
Chlorine  
Chloroform  
Hydrogen Bromide\*  
Cyanogen Chloride  
Methylene Chloride  
Carbon Tetrachloride  
TCE, PCE

##### Bis-(2-Chloroethyl) Sulfide

##### Pinacolyl methylphospho-nofluoridate

##### O-ethyl S-(2-diisopropylaminoethyl)lmethylphosphonothioate

#### Vapour Hazards

##### Acidic and Caustic Gases

Hydrogen Chloride  
Hydrogen Fluoride  
Hydrogen Bromide\*  
NO<sub>x</sub>/N<sub>2</sub>O<sub>4</sub>\*  
Sulfur Dioxide  
Hydrogen Sulfide\*  
Diborane\*  
Hydrogen Selenide\*  
Phosphine\*  
Ammonia  
Anhydrous Ammonia\*  
Carbonyl Sulfide  
Hydrogen Cyanide\*

##### Chlorinated Organics

Acetyl Chloride  
Chloroacetyl Chloride  
Chloroform  
Methylene Chloride

##### Halogens

Chlorine\*  
Bromine  
Iodine

##### Volatile Organics

Methyl Mercaptan\*  
Ethylene Oxide\*  
Formaldehyde\*  
Phosgene\*  
Arsine\*

### ADSORPTION

#### Liquid Solvent Spills

##### Alcohols/Phenols

Ethanol  
Methanol  
Allyl Alcohol\*  
Nitrophenols  
Chlorophenols

##### Caustics

Metal Hydroxides (aq)

##### Petrochemicals

Diesel  
Gasoline  
Oils

##### Others

Acrylonitrile\*  
Benzene  
Hydrazine\*  
Toluene  
Acrolein\*  
Methylhydrazine\*  
Methylisocyanate\*

### NOT EFFECTIVE ON

#### Biologicals

Bacteria  
Viruses  
Spores

#### Nuclear

#### Radiological

#### Heavy Metals

#### Solid Waste

### 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)

SPECIALIST  
PLUMBING SOLUTIONS

ADAPTABLE WORK  
& LIVING SOLUTIONS

ENVIRONMENTAL, HEALTH  
& SAFETY SOLUTIONS

STAINLESS STEEL  
WASHROOM SYSTEMS



WWW.ENWARE.COM.AU/FASTACT



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# FASTACT<sup>®</sup>

**ENWARE**  
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## Chemical Hazard Containment and Neutralization System

### Advantages

- **Effective** against a wide range of toxic chemicals, including (but not limited to):
  - Acids (including Hydrofluoric acid)
  - Halogenated Compounds
  - Phosphorus Compounds
  - Acidic and Caustic Gases (including H<sub>2</sub>S)
  - Organic Compounds
  - Chemical Warfare Agents
- **Neutralizes** both liquid and vapor contaminants in air, soil, and water
- **Rapid-acting** upon contact
  - Life-safety threat reduction
  - Reduces on-site management time and cost
- **Safe:** Non-toxic, non-corrosive, non-flammable and environmentally friendly
- Dry powder formulation
- **Easy to operate** portable delivery systems
  - No premixing is required
- **No special training** required to deploy
- Effective over a wide range of temperatures and environmental conditions
- Accessories available for storage/mounting purposes
- Homeland security
- Public protection
- **Compatible** with existing sensor technologies



FAST-ACT<sup>®</sup> (First Applied Sorbent Treatment - Against Chemical Threats) is a proprietary formulation of safe earth minerals capable of neutralizing a wide range of Toxic Chemicals with the added ability to destroy Chemical Warfare Agents.

The FAST-ACT family of products has expanded utility for law enforcement, industrial, laboratory and public protection applications.

**NanoScale**<sup>®</sup>

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# Summary of Effectiveness

Neutralization		Absorption	Containment	Not Protected
<b>Corrosive Materials</b>		<b>Vapor Hazards</b>	<b>Liquid Solvent Spills</b>	
<b>Acids</b> Inorganic and Organic Hydrochloric Acid Hydrofluoric Acid* Nitric Acid* Phosphoric Acid Sulfuric Acid* Acetic Acid Methanesulfonic Acid Ethanesulfonic Acid Benzenesulfonic Acid Toluenesulfonic Acid	<b>Carbonyl Compounds</b> Aldehydes* Ketones Carboxylic Acids  <b>Nitrogen Compounds</b> Acetonitrile* Sodium Cyanide (aq) 4-vinylpyridine  <b>Halogens/Halides</b> Acetyl Chloride Chloroacetyl Chloride Chlorine Chloroform Hydrogen Bromide* Cyanogen Chloride Methylene Chloride Carbon Tetrachloride TCE, PCE	<b>Acidic and Caustic Gases</b> Hydrogen Chloride Hydrogen Fluoride Hydrogen Bromide* Nox/N2O4* Sulfur Dioxide Hydrogen Sulfide* Diborane* Hydrogen Selenide* Phosphine* Ammonia Carbonyl Sulfide Hydrogen Cyanide*  <b>Chlorinated Organics</b> Acetyl Chloride Chloroacetyl Chloride Chloroform Methylene Chloride  <b>Halogens</b> Chlorine* Bromine Iodine  <b>Volatile Organics</b> Methyl Mercaptan* Ethylene Oxide* Formaldehyde* Phosgene* Arsine*	<b>Alcohols/Phenols</b> Ethanol Methanol Allyl Alcohol* Nitrophenols Chlorophenols  <b>Caustics</b> Anhydrous Ammonia* Metal Hydroxides (aq)  <b>Petrochemicals</b> Diesel Gasoline Oils  <b>Others</b> Acrylonitrile* Benzene Hydrazine* Toluene Acrolein* Methylhydrazine* Methylisocyanate*	<b>Biologicals</b> Bacteria Viruses Spores  <b>Nuclear</b>  <b>Radiological</b>  <b>Heavy Metals</b>  <b>Solid Waste</b>
<b>Phosphorus</b> Pesticides Dimethylmethyl Phosphonate Paraoxon Parathion*	<b>Bis-(2-Chloroethyl)Sulfide</b>  <b>Pinacolyl methylphospho - nofluoridate</b>  <b>O-ethyl S-(2- diisopropylaminoethyl) methylphosphonothioate</b>			
<b>Sulfur</b> 2-Chloroethyl Ethyl Sulfide Methyl Mercaptan				
<b>Phenols</b> Nitrophenols Chlorophenols				
<b>LIQUID &amp; VAPOR CHEMICAL SPILLS AND RELEASES</b>				
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)				