

Applied Chemicals International Group
Technical Service is our Success



ECOSORB[®]

Odour Control Aids
and Application Systems for Several Industries

air [] tech

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Innovative Technology for Air and Soil Improvement and Odour Neutralisation

Major Benefits of Ecosorb®

Ecosorb® odour control solutions have been used for many years all over the world within the municipal waste water treatment (sewage), landfill & waste handling, food processing, feed manufacturing, composting, rendering & tanning, oil & gas refining and other industrial sectors. Ecosorb® neutralises a host of common mal-odours on contact including: hydrogen sulphide, ammonia, sulphur dioxide, ethyl and methyl mercaptans, amines, styrene and other less soluble odours. In many industries Ecosorb® offers odour control where no other practical alternative exists, or costs are prohibitive, namely:

- in diffuse 'direct-to-atmosphere' situations
- where multi-gas or difficult odour sources exist
- temporary problems
- for seasonal problems

When applied through the appropriate dosing equipment, Ecosorb® provides excellent neutralisation of many commonly found mal-odorous gases. Whether these odours are produced by inorganic, organic, acidic or alkaline gases is no problem as Ecosorb® provides broad-spectrum odour neutralisation.

The Benefits of Ecosorb® are:

- provides broad-spectrum odour neutralisation
- does not simply 'mask' odours
- is safe to handle and simple to apply
- provides odour control where no other technology can
- gives cost-effective solutions to nuisance odour complaints
- helps industry meet environmental regulations



Industries Served by Ecosorb® Applications

The versatility of Ecosorb® in neutralising many odours, and the numerous application techniques developed over almost twenty years, has led to a truly amazing portfolio of industries where Ecosorb® has provided a cost-effective abatement solution to customer's odour problems.

Here below the list of major blue-chip companies that have successfully used this technology over the years:

- Municipal WWTW
- Industrial Effluent Treatment
- Oil & Gas Refineries
- Asphalt Plants
- Power Generation
- Waste Transfer Stations
- Compost Sites
- Steel Mills
- Pharmaceuticals Plants
- Chemical Manufacturers
- Foundries
- Rubber Manufacturing
- Packaging Plants
- Food & Fish Processors
- Fiberglass Fabricators
- Land Remediation
- Landfill Sites
- Animal Feed Processing
- Etc.



Reasons for Odour Control

Here are two major drivers as to why business should control the odours they produce during their operations; namely environmental regulation in the form of IPPC (Integrated Pollution Prevention and Control) and secondly to stop nuisance odour complaints from neighbours or workers.

By controlling the odours they produce businesses tend to be more successful, have better relations with their neighbours and workers and are likely to experience fewer pressures from environmental or planning regulators.

IPPC is an EU Council Directive that was implemented in 1996. Since that date it has been 'rolled out' across EU Member States, becoming part of National Law in each Country, and covering various large-scale industrial operations.

Industries regulated by IPPC:

- Combustion installations > 50MW
- Mineral oil and gas refineries
- Coke ovens
- Coal gasification and liquefaction plants
- Metal industry
- Cement, lime, glass, mineral substances or ceramic products
- Production of asbestos and asbestos related products
- Basic organic chemicals
- Basic inorganic chemicals or fertilisers
- Biocides and explosives
- Pharmaceutical products
- Disposal/recovery of hazardous or municipal waste

- Disposal of non-hazardous waste and landfills
- Pulp, paper or board production
- Pretreatment of fibres or textiles
- Tanning of hides and skins
- Slaughterhouses, milk, animal and vegetable raw materials
- Disposal or recycling of animal carcasses and animal waste
- Poultry, pigs and sows
- Surface treatment or products using organic solvents
- Production of carbon or graphite

For those industries or businesses not directly controlled by the IPPC Directive, there are additional local laws covering emissions to land, air and water, as well as laws relating to the production and release of odours that cause offence to neighbouring residents or businesses.

Exposure to odours can have a serious effect upon people's well-being. Odours can produce effects in people of general annoyance and lead to changes in their behaviour to overcome this, which causes further annoyance! Odours can also interfere with sleep or induce headaches, coughing or nausea.

No matter what the effects of odours are upon individuals the cause of complaints concerning odours is rightly taken very seriously by local authorities because of the debilitating effect these can have upon people.

'Health is not only absence of disease but a state of complete physical, mental and social wellbeing'





How Ecosorb® works

Ecosorb® chemically neutralises many acidic, alkaline, inorganic or organic gases, or mixtures of these. Once neutralised the resulting chemicals are harmlessly deposited on the ground where they are rapidly broken down by microbial and climatic activity.

Over the years a great deal of laboratory work has been undertaken to better understand the reactions that take place when a number of gases come into contact with Ecosorb® irrespective of whether the odorous gases are basic, acidic or neutral the typical sequence of chemical neutralisation includes; adsorption, absorption, oxidation/reduction, pairing or complexing.

Where Ecosorb® works

Ecosorb® products can be applied through a wide variety of application equipment to provide odour control in many different situations. Typical requirements are to control odours when the mal-odours are:

- diffuse – such as at a landfill site or effluent treatment tank
- localised – within a wet well or from a tank vent
- unconfined – from compost heaps or a leachate lagoon
- confined – within duct work or exhaust stack, prior to release
- mobile – during land remediation operations
- temporary – such seasonal, infrequent or ‘one-off’ such as tank cleaning
- Emergency – following a fire or flood, or during equipment breakdown



Typical Ecosorb® Application Equipment



High-pressure nozzle line used to atomise Ecosorb® during diffuse odour situations.



Compressed air nozzle used to atomise Ecosorb® in air handling.



An atomising fan used to atomise Ecosorb® at localised odour situations.



Ecosorb® Vapour Phase Equipment used at a site perimeter.



Ecosorb® Vapour Phase Equipment used around a large settling pond.



Ecosorb® vapour distribution at a refinery settlement



Features of Ecosorb®

Extensive work has been done over many years on the safety of Ecosorb® in the environment and to humans. As a result of this work it is safe to claim that Ecosorb® is:

- non-toxic
- non-masking
- bio-degradable
- organic
- environmentally assured

Cost Benefits of Ecosorb®

The capital cost of installing and running an Ecosorb® neutralisation system are often much

less than for any other technology, plus Ecosorb® systems works where many others fail.

Contact

For more information on Ecosorb® or to arrange a visit by Applied Chemicals to discuss the benefits this odour neutralising system can offer your business please contact Mrs. Barbara Scaramelli, barbara.scaramelli@acat.com or Mr. Luca Faggionato, luca.faggionato@acat.com.

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