



# Press Release

January 26, 2010

To whom it may concern:



Legal Affairs and Publicity Department,  
Publicity and Administration Group  
Contact: +81-3-4455-2803  
[http : //www.adeka.co.jp](http://www.adeka.co.jp)

## **Full-scale Production Plant for Flame Retardants to be Used with Polyolefin Resins**

ADEKA (President : Kunihiro Sakurai; head office: Tokyo, JAPAN) is pleased to announce that it has decided to construct a plant for the manufacture of intumescent flame retardants, which can be used to add flame retardancy to polyolefin resins, at its wholly-owned subsidiary ADEKA FINE CHEMICAL (SHANGHAI) Co., Ltd.

The plant will have a production capacity of 5,000 tons, and its construction will start in January 2010 and be completed in January 2011.

Investment in the construction of this plant is projected to reach about 1.5 billion yen, and ADEKA FINE CHEMICAL (SHANGHAI) Co., Ltd. plans to increase its capital by 10 million US dollars.

Our conventional Oligomeric Phosphate Flame Retardants are mainly intended for use with polycarbonate/ABS resins that are used for the housing of televisions, personal computers and other such products. Intumescent flame retardants, however, will be used to add flame retardancy to polyolefin resins.

Having developed these intumescent flame retardants in 2001, we have already installed small-scale production equipment at our Fuji Plant. Until now we have focused on developing markets but, given the recent environmental and other problems, we expect there to be considerable global demand for non-halogen flame retardants for products such as wire coating materials for electronic equipment. For this reason, we have decided to establish a new plant in China with access to materials and competitiveness in mind.

Intumescent flame retardants form intumescent char, adding flame retardancy to polyolefin resins. **They therefore emit less smoke and generate less carbon monoxide during combustion than conventional bromine flame retardants. This means that intumescent flame retardants have a considerable advantage in the prevention of fire-related injuries or deaths.**

**Another advantage they have is that less needs to be added (about 25% to 40%) than is the case with inorganic flame retardants, contributing greatly to the excellent workability and physical properties of polyolefin resins.**

Given these advantages, intumescent flame retardants can be applied to all polyolefin resins used for parts and materials that need to be made flame resistant, such as

home appliances, personal computers, building materials, and vehicles. More specifically, we expect electric wires made of polyvinyl chloride (PVC) resins, which are now used widely for home appliances and other products due to their high degree of flame retardancy, to be replaced by electric wires made of polyolefin resins with intumescent flame retardants in order to meet the increasing demand for non-halogen flame retardants. We also expect the construction industry to be a great market for these flame retardants in the future. It is said that most fatal accidents caused by fire are attributable to carbon monoxide poisoning caused by smoke generated in the early stages of a fire. As these new flame retardants generate little carbon monoxide, they can be considered suitable for use with building materials that use polyolefin resins. Going forward, this is the application that we will focus on.

(for your reference)

☆ **Corporate profile of ADEKA FINE CHEMICAL (SHANGHAI) Co., Ltd.**

Name	ADEKA FINE CHEMICAL (SHANGHAI) Co., Ltd.
location	JINSHAN DISTRICT, SHANGHAI, CHINA
Capital	After capital increase : 20.5 million US\$
Established	2002,8
Delegate	Managing Director Hiroshi Serata
Business Contents	Manufacture and sale of polymer additives, functional resins and electronics chemicals.
Number of Employees	79

☆ **Our ADK STAB FP-2100J and FP-2200 intumescent flame retardants have the following features:**

- They contain nitrogen and phosphorus.
- They emit little smoke and generate very little carbon monoxide when exposed to flame.
- They have excellent thermal stability and emit little gas during processing.
- They have low toxicity and contain no halogen.
- They are resistant to heat discoloration.
- They have a higher degree of weatherability and water resistance than conventional intumescent flame retardants.
- Their flame retardancy deteriorates very little even when mixed with additives added to increase the amount of plastic or pigments added for coloring.
- They allow for the development of resins that have low densities and excellent physical properties.