



Health Effects of Thermbond Formula Activator

Thermbond Formula Activator is a diluted orthophosphoric acid, a water-soluble, non-toxic, inorganic, weak acid. Inorganic phosphate ion is naturally found in the human body and is an ingredient in vitamins. Phosphoric acid is also used in many food items such as soft drinks.

The *Canadian Centre for Occupational Health and Safety* published detailed information regarding working with Phosphoric Acid, and associated health effects.¹ Following are excerpts from the Q/A section of this website regarding diluted phosphoric acid:

What are the main health hazards associated with breathing in phosphoric acid?

Phosphoric acid has low vapor pressures at room temperature and is not expected to present an inhalation hazard unless a mist is generated. Mists can probably cause irritation of the nose, throat and respiratory tract.

What happens when phosphoric acid comes into contact with my skin?

The degree of irritation caused by phosphoric acid depends upon the concentration of the solution and the duration of contact. Dilute solutions can probably cause mild to moderate irritation. There is no human information available.

Can phosphoric acid hurt my eyes?

The degree of irritation caused by phosphoric acid depends upon the concentration of the solution and the duration of contact. Concentrated acid can cause severe burns and permanent eye damage, based on animal information. Mists may cause eye irritation. There is no human information available.

What happens if phosphoric acid is accidentally swallowed (enters the digestive system)?

There are no reports of occupational ingestion of phosphoric acid. Ingestion is not a typical route of occupational exposure.

What are the long term health effects of exposure to phosphoric Acid?

SKIN: Repeated or prolonged contact may result in dermatitis (dry, red skin).

INHALATION: Pulmonary function was studied in a group of 131 phosphorus refinery workers employed for 3 to 46 years.. No significant changes in pulmonary function were observed.

Is there potential for phosphoric acid to build-up or accumulate in my body?

Phosphoric acid can be absorbed into the body and enters the phosphate pool. Inorganic phosphate ion is naturally found in the body. It is excreted mainly in the urine.



Health Effects of Thermbond Formula Activator

Thermbond Formula Activator is comprised of 50% diluted phosphoric acid, further reducing health risks.

There are no special requirements necessary for storage of Thermbond Formula Activator. Spills of phosphoric acid can be treated with oil binder, neutralization agent or diluted with water. When handling spills avoid direct skin contact and follow safety precautions described on the Formula Activator Material Safety Data Sheet (MSDS).²

Thermbond Formula Activator is designed specifically to be mixed with the Formula Series Dry Mixes and should not be used for any other purpose. The information contained herein is not meant to replace the MSDS. Please follow all guidelines on the MSDS.

If you have additional questions, please visit the websites referenced below or contact:

Jens Decker
Vice President, Engineering
Stellar Materials Incorporated
jens.decker@thermbond.com
561-504-4305 direct

References

¹ *Canadian Centre for Occupational Health and Safety.*
http://www.ccohs.ca/oshanswers/chemicals/chem_profiles/phosphoric/health_pho.html#_1_8

² Stellar Materials Incorporated *Material Safety Data Sheet for Thermbond Formula Activator:* [http://www.thermbond.com/MSDS/MSDS\(USA\)Thermbond_Formula_Activator\(USA\).pdf](http://www.thermbond.com/MSDS/MSDS(USA)Thermbond_Formula_Activator(USA).pdf)