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____ lbs.

Vulcan

GLAZD PENTA

(TECHNICAL PENTACHLOROPHENOL)*

For Manufacturing Purposes Only

Vulcan GLAZD® Penta is used for the preparation of fungicidal, insecticidal and herbicidal solutions. Recommended concentrations for such solutions vary according to the end uses and methods of applying solutions to get the desired biological control. For the preparation of wood preservation formulations and methods of applying them to wood, consult the American Wood-Preservers' Association Manual of Recommended Practice or contact Vulcan Materials Company, Chemicals Division. For other applications, consult Vulcan Materials Company, Chemicals Division.

ASSAY

ACTIVE INGREDIENTS 96%

Pentachlorophenol — 86%

Other Chlorophenols
and Related Compounds — 10%

INERT INGREDIENTS 4%

Total 100%

- * MEETS FEDERAL SPEC. TT-W-570a
- * MEETS AWWA SPEC. P-8
- * MEETS ASTM SPECIFICATION D1272-56

Vulcan Materials Company

CHEMICALS DIVISION P. O. BOX 545 • WICHITA, KANSAS 67201

USDA REGISTRATION NO. 5382-16

WARNING: KEEP OUT OF THE REACH OF CHILDREN!
MAY BE FATAL IF INHALED, SWALLOWED,
OR ABSORBED THROUGH SKIN!

Do not breathe dust. Do not get either the dry material or solutions prepared from it, in eyes, or on skin or clothing. If swallowed, induce vomiting by administering mustard and water or other emetic and call a physician. In case of contact with the eyes, flush with water for at least fifteen (15) minutes and contact a physician. In case of contact with the skin, wash immediately with soap and water. Wash thoroughly with soap and water after handling.

Do not reuse empty drum or bags: destroy by incinerating and/or burying in a safe place.

This product is toxic to fish and wildlife. Do not contaminate water by cleaning of equipment or disposal of wastes.

FORM 3 41-16

SAFE HANDLING OF PENTACHLOROPHENOL

(Crystals and Solutions)

Pentachlorophenol, like any other chemical that possesses biological activity, can cause discomfort or actual harm to the human body unless the chemical itself or formulations made from it, are handled properly. Penta (as it is known in the trade) and its formulations have been used industrially since 1936. No health problems have arisen from its use where proper procedures for handling these products were observed.

It is the purpose of this bulletin to present procedures for the safe handling of Pentachlorophenol and its formulations, and to suggest steps to be taken in the event that accidental exposures do occur.

How Penta Could Get Into The Body

Pentachlorophenol could enter the body through the mouth, the nose by inhalation, or by absorption through the skin. Since Penta is a crystalline product, its chief action to the body comes from the breathing of fine particles or from getting particles in the eyes or on the skin. Choking or sneezing usually occurs when the crystals get into the mouth or nose; a burning sensation results when the crystals get into the eyes or mouth; a prickling sensation usually results when the crystals contact the skin.

Formulations of Penta could enter the body through the mouth (although this would almost always occur accidentally or from carelessness), or the Penta from solutions could be inhaled as vapors at points of formulation or use, or the solutions could contact parts of the body and unless immediately removed, could be absorbed through the skin.

Safe Handling Of Penta Crystals

Labels on Pentachlorophenol usually carry the following precautionary statements:

Harmful if swallowed or absorbed through the skin.
Causes skin irritation. Do not breathe vapor, fumes or spray mist. Do not get in eyes, on skin or on clothing.

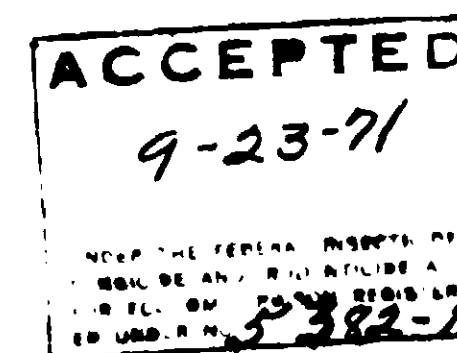
Wash thoroughly after using.
Avoid contamination of food or foodstuffs.
Keep out of reach of children.

An analysis of the above precautionary measures brings out these points:

1. Penta crystals should be kept from entering the body either through the mouth, the nose, or through the skin. A respirator or other protector should be worn if the methods of handling Penta could result in its getting into the nose or the mouth.
2. If Penta crystals get on the skin, they can cause irritation. It is better to wash crystals off the skin with soap and water than to use alcohols or other solvents that could carry the Penta on into the skin. To prevent skin contact, synthetic rubber gloves or equivalent may be worn. Silicone protective creams as sold commercially, if applied to the skin before contact with crystalline Penta or Penta solutions, have also proved helpful in preventing skin irritation.
3. Goggles should be worn to prevent contact of Penta crystals with the eyes. In case the crystals do get into the eyes, flood the eyes with water for fifteen minutes. Do not rub the crystals into the eyes! If irritation persists after flooding the eyes with water, contact a physician immediately.
4. It is good policy after handling any biocide such as Penta to wash thoroughly after handling and before eating, smoking, or handling food.
5. The material should not be handled or stored in such a manner that foodstuffs either for human consumption, for pets, or for livestock feed, could be contaminated.

Safe Handling Of Penta Solutions

Practically the same advice applies to the safe handling of Penta solutions as applies to the handling of Penta crystals; keep them out of the mouth and the eyes, avoid exposure to the vapors, and keep them off the skin and clothing. This may require the use of goggles, synthetic rubber or other oil resistant gloves, aprons, or other protective clothing. Clothing which becomes contaminated with Penta or Penta solutions should be laundered before rewearing.



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THIS INFORMATION is believed to be reliable; however, Vulcan Materials Company can make no guarantee of results, and assumes no liability in connection with any failure of method or equipment, nor for any alleged infringement of any patent, since it is not under the direct control of Vulcan Materials Company.

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ACCEPTED

9-23-71

Remember --- NEVER put solutions in soft drink or other bottles or store in such a way that children can get at them. Do not store or use Penta or its formulations in such a way that they can contaminate feed or foodstuffs.

Furthermore, petroleum oils or other solvents or carriers used in the preparation of Penta formulations are almost always flammable. Therefore, Penta solutions should not be stored or used near sources of heat or near open flames.

First Aid Treatments

In case of skin contact, wash with plenty of soap and warm water. In case of eye contact, flush eye or eyes with plenty of water for at least fifteen minutes. Since solvents as well as Penta may be harmful to the eyes, contact your physician.

In case of accidental swallowing, induce vomiting by administering mustard and water or other emetic, and call a physician.

Other Suggestions To Users

So far we have dwelt primarily with safe handling procedures. Because of the many ways Penta solutions are used, the following suggestions are given on how to prevent problems due to misuse of the product.

One of the chief uses of Pentachlorophenol is for wood preservation. There are many kinds of Penta formulations, each prepared especially for certain end uses. Some Penta treated wood may not be paintable, some may not be suitable for use on wood in confined areas. Precautions should be taken to see that Penta treated wood does not come in contact with feed or foodstuffs. Do not use Penta treatment in buildings where meat or dairy animals are quartered.

Penta formulations have been used to treat pallets and other wood items to prevent powderpost beetle damage as well as damage from other wood boring insects. Care should be exercised to see that Penta treated wood does not contaminate feed or foodstuffs.

Pentachlorophenol and its solutions can kill plants. It is not translocated in plants, i.e., it is not systemic. Rather, it kills plants by contact. If solutions of Penta get on plants, they can kill some types or completely defoliate others. Therefore, if desirable plants are in the area where wood "in place" is to be treated with preservative solutions, they should be protected from spray drift and from the vapors from freshly treated wood.

Why This Bulletin?

The purpose of this bulletin is to recommend safe handling procedures for Pentachlorophenol and its formulations. Millions of

pounds of Penta and millions of gallons of Penta solutions are used each year without any occurrences of discomfort or injury. The simple precautions outlined in this bulletin have served well to avoid creation of any health or end-use hazards.

We have attempted to tell how health hazards can arise, how to prevent trouble, and have indicated what to do in case of accident or neglect.

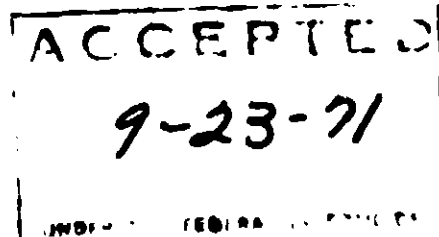
Penta is a valuable, biologically active industrial chemical -- use proper handling procedures.

ACCEPTED

9-23-71

UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC PESTS CONTROL
NO. 5382-16

ACCEPTED WITH COMMENTS



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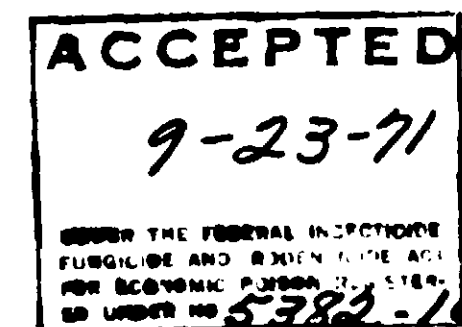
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