

DIATOMACEOUS EARTH: ITS USE AND PRECAUTIONS

THE SPCA CERTIFIED GUIDE

BCSPCA



WHAT IS DIATOMACEOUS EARTH?

Diatomaceous Earth (DE) is a naturally occurring soft, silicon rock made of fossilized diatoms, a type of hard-shelled algae. The DE is dried and milled into fine dust that can be used as a bio-pesticide, due to the high absorptive and abrasive properties of the silica. The DE dust gets trapped on the insect and damages the cuticle (waxy outer layer of the exoskeleton), causing them to dehydrate and die. Natural amorphous DE does not produce toxic chemical residues, and is considered to be reasonably harmless.



METHODS OF USE

DE products are commonly used as natural insecticides in crop production and in pest management of stored grains. There are also a few products manufactured as anti-caking additives in livestock feeds and for the control of external insect parasites.

HEALTH HAZARDS AND PRECAUTIONS

It must be noted that not all types of DE are safe. Certain types of DE, saltwater forms in particular, contain high percentages of *crystalline silica*. Long-term exposure to high levels of *crystalline silica* dust can cause silicosis or other respiratory problems in humans. However, the effects on farm animals are not well known. Particular precautions should be taken to minimize the amount animals are exposed to DE dust containing *crystalline silica*, especially when these products are used in closed barns.

The SPCA Certified program does not recommend the use of DE products containing >1% of *crystalline silica*. The product label or its Material Safety Data Sheet (MSDS) should be checked for the composition of hazardous ingredients including crystalline silica (also called: tripoli, tridymite, quartz, cristobalite, or fused silica).

DIATOMACEOUS EARTH IN ORGANIC PRODUCTION

The Certified Organic Associations of BC (COABC) standards as well as the new National Organic Standards of Canada allow the use of natural DE for farm animal health care.

The only Brand Name product currently approved by COABC and OMRI (Organic Materials Review Institute) for use in farm animal health care is **Barn Fresh**® (Absorbent Products Ltd). This product is also registered as a reduced-risk biopesticide (#27265) with Health Canada's Pest Management Regulatory Agency.



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USE OF DIATOMACEOUS EARTH UNDER THE SPCA CERTIFIED PROGRAM

When the use of DE is necessary for external parasite control, it is highly recommended that SPCA Certified members use Barn Fresh®. Please contact the manufacturer for further information.

Absorbent Products Ltd.

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FOR FURTHER INFORMATION ON DIATOMACEOUS EARTH

MSDS for Barn Fresh (containing <1% crystalline silica)

<http://www.wicp.com/SiteCM/U/D/A68463143E0C727F.pdf>

National Standard of Canada – Organic Production Systems Permitted Substances List (CAN/CGSB-32.311-2006)

http://www.pwgsc.gc.ca/cgsb/on_the_net/organic/032_0311_2006-e.pdf

OMRI Products List – Livestock Production Products

http://www.omri.org/livestock_generic.pdf

COABC - Brand Name Product List

http://www.certifiedorganic.bc.ca/standards/bnp_list.php

Pest Management Regulatory Agency – Reduced Risk Pesticide Update (RR2006-02)

<http://www.pmr-arla.gc.ca/english/pdf/rr/rr2006-02-e.pdf>

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