Product Safety Assessment

ADCOTE™ 50 Series Ethylene Acrylic Acid (EAA) Heat-Seal Coatings

Product Safety Assessment documents are available at www.dow.com/productsafety/finder/.

Select a Topic:
Names
Product Overview
Manufacture of Product
Product Description
Product Uses
Exposure Potential
Health Information
Environmental Information
Physical Hazard Information
Regulatory Information
Additional Information
References

Names
Trade names and grades for these products include, but are not limited to, the following:

- ADCOTE™ 50 Series Ethylene Acrylic Acid (EAA) Heat-Seal Coatings
- ADCOTE 50C12 Heat-Seal Coating
- ADCOTE 50C30 Heat-Seal Coating
- ADCOTE 50C35 E Heat-Seal Coating
- ADCOTE 50C35 HV Heat-Seal Coating
- ADCOTE 50T4990 Heat-Seal Coating

Product Overview
- ADCOTE™ 50 Series EAA Heat-Seal Coatings are water-based dispersions of ethylene acrylic acid polymers supplied as white liquids with an ammonia odor.¹,² For further details, see Product Description.
- ADCOTE 50 Series EAA Heat-Seal Coatings are used as primers and coatings for various substrates, including metal, foil, paper, and polyethylene.³ For further details, see Product Uses.
- Exposure can occur either in facilities that manufacture ADCOTE 50 Series EAA Heat-Seal Coatings or in the various industrial or manufacturing facilities that use these products. ADCOTE 50 Series EAA Heat-Seal Coatings are not sold directly to consumers, but these products are used in various packaging applications so consumers may come into contact with them. Exposure to cured and/or dried product is not considered to present a risk to consumers.⁴ For further details, see Exposure Potential.
- Eye contact to uncured product may cause slight irritation. Prolonged or repeated skin contact may cause slight irritation. Inhalation of vapor or mist may cause headache, nausea, and irritation of the nose, throat, and lungs. Exposure to the individual, minor component aqueous ammonia (ammonium hydroxide) may cause severe eye and skin burns with severe local tissue damage and corneal injury that may result in permanent impairment of vision, even blindness. Liquid may cause frostbite. Excessive exposure to vapors or mist may cause severe irritation of the nose, throat, and lungs. Ingestion may cause corrosive burns of the mouth, esophagus, and stomach.⁵ For further details, see Health Information and the relevant Safety Data Sheet.
- The polymer components in ADCOTE™ 50 Series EAA Heat-Seal Coatings are expected to slowly degrade in the environment. Due to their high molecular weight, the polymers are not expected to accumulate in the food chain, and they are not expected to be toxic to fish or other aquatic organisms.⁶ For further details, see Environmental Information.

¹Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow
ADCOTE™ 50 Series EAA Heat-Seal Coatings are stable under recommended storage and normal use conditions. Keep these products from freezing. For further details, see Physical Hazard Information.

### Manufacture of Product
- **Locations** – ADCOTE™ 50 Series EAA Heat-Seal Coatings are manufactured in various global locations by Rohm and Haas Company, a wholly owned subsidiary of The Dow Chemical Company, and its global affiliates.
- **Process** – ADCOTE 50 Series EAA Heat-Seal Coatings are produced using proprietary processes and materials.

### Product Description
ADCOTE™ 50 Series EAA Heat-Seal Coatings are water-based dispersions of ethylene acrylic acid polymers supplied as white liquids with an ammonia-like odor. They are typically composed of 20 to 30% solids.

### Product Uses
ADCOTE™ 50 Series EAA Heat-Seal Coatings are used as primers and sealants in packaging applications. These products offer excellent adhesion to a variety of substrates, including paper, paperboard, metal, and foil. When dried, these products exhibit excellent chemical resistance, heat-seal, and hot tack properties.

### Exposure Potential
ADCOTE™ 50 Series EAA Heat-Seal Coatings are used in the production of industrial and consumer products. Based on the uses for these products, individuals could be exposed through:
- **Workplace exposure** – Exposure can occur either in facilities that manufacture ADCOTE™ 50 Series EAA Heat-Seal Coatings or in the various industrial or manufacturing facilities that use them. These products are produced, transported, and stored in closed systems. Those working with ADCOTE 50 Series EAA Heat-Seal Coatings in manufacturing operations could be exposed during maintenance, sampling, testing, or other procedures. Each manufacturing facility should have a thorough training program for employees and appropriate work processes, ventilation, and safety equipment in place to prevent exposure. See Health Information.
- **Consumer exposure to products containing ADCOTE 50 Series EAA Heat-Seal Coatings** – Dow does not sell these products for direct consumer use, but they are used as coatings and primers on various substrates for packaging applications, so consumers may come into contact with them. Exposure to cured and/or dried product is not considered to present a risk to consumers. See Health Information.
- **Environmental releases** – In the event of a spill, the focus is on containing the spill to prevent contamination of soil, surface water, or groundwater. Respiratory protection is necessary for cleaning up spills and leaks. Small spills should be absorbed with materials such as sand. If released to the environment, the polymer components in these products would tend to float in water and will be removed in biological wastewater treatment plants by adsorption to biosolids. These products are expected to be practically nontoxic to aquatic organisms on an acute basis. See Environmental, Health, and Physical Hazard Information.
- **Large release** – Industrial spills or releases are infrequent and generally contained. If a large spill does occur, the product should be captured, collected, and reprocessed or disposed of according to applicable governmental regulations. Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions. Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. See Environmental, Health, and Physical Hazard Information.
- **In case of fire** – These products are noncombustible, but thermal decomposition may yield acrylic monomers. Use extinguishing media appropriate for surrounding fire. Material can splatter above 100°C (212°F). Dried product can burn. Wear self-contained breathing apparatus and protective suit. Follow emergency procedures carefully. See Environmental, Health, and Physical Hazard Information.

For more information, request the Safety Data Sheet from the Dow Customer Information Group.
Health Information

Health information for ADCOTE™ 50 Series EAA Heat-Seal Coatings is summarized on the relevant Safety Data Sheets. These materials may also contain minor components or additives that have additional health risks. It is important to note that health risks associated with individual products may vary based on their formulation or intended use. An overview of health information for ADCOTE 50 Series EAA Heat-Seal Coatings appears below. However, the Safety Data Sheet is the preferred source for specific health information.

Eye contact – Direct contact may cause slight eye irritation.

Skin contact – Prolonged or repeated contact may cause slight skin irritation.

Inhalation – Inhalation of vapor or mist may cause headache, nausea, and irritation of the nose, throat, and lungs.

Other – Exposure to the individual minor component aqueous ammonia (ammonium hydroxide) may cause severe eye and skin burns with severe local tissue damage and corneal injury that may result in permanent impairment of vision, even blindness. Liquid may cause frostbite. Excessive exposure to vapors or mist may cause severe irritation of the nose, throat, and lungs. Ingestion may cause corrosive burns of the mouth, esophagus, and stomach.

For more information, request the Safety Data Sheet from the Dow Customer Information Group.

Environmental Information

Environmental information for ADCOTE™ 50 Series EAA Heat-Seal Coatings is summarized on the relevant Safety Data Sheets. These materials may also contain solvents or additives that have additional environmental impact. It is important to note that environmental impact associated with individual products may vary based on their formulation or intended use. An overview of environmental information for ADCOTE 50 Series EAA Heat-Seal Coatings appears below. However, the Safety Data Sheets are the preferred source for specific environmental information.

The polymer components in ADCOTE 50 Series EAA Heat-Seal Coatings are nonvolatile and insoluble in water. If released to the environment, the polymers will tend to float in water and eventually bind to soil, suspended solids, or sediment. Although the polymers are not biodegradable, they would be expected to degrade slowly in the environment, including degradation by physical action or by exposure to sunlight. The polymers would likely be removed in biological wastewater treatment plants by adsorption to biosolids. The polymers are not likely to accumulate in the food chain due to their high molecular weight (bioconcentration potential is low), and they are not expected to be toxic to fish (LC50 >100mg/L) or other aquatic organisms on an acute basis.

For more information, request the Safety Data Sheet from the Dow Customer Information Group.

Physical Hazard Information

ADCOTE™ 50 Series EAA Heat-Seal Coatings are stable under recommended storage and normal use conditions. Spilled product may create a slipping hazard. Keep these products from freezing, as product stability may be affected. Monomer vapors may be evolved when the products are heated during processing operations and appropriate personal protective equipment should be used.

For more information, request the Safety Data Sheet from the Dow Customer Information Group.

Regulatory Information

Regulations may exist that govern the manufacture, sale, transportation, use, and/or disposal of ADCOTE™ 50 Series EAA Heat-Seal Coatings. These regulations may vary by city, state, country, or geographic region. Information may be found by consulting the relevant Safety Data Sheet or Contact Us.

Regulatory Information
Product Safety Assessment: ADCOTE™ 50 Series EAA Heat-Seal Coatings

Additional Information

- Request Safety Data Sheets and Technical Data Sheets from the Dow Customer Information Group (www.dow.com/assistance/dowcig.htm)
- Contact Us (www.dow.com/assistance/dowcig.htm)
- ADCOTE™ 50C12 Primer (Technical Data Sheet), Packaging and Converting, Rohm and Haas Company, July 2006

For more business information about ADCOTE™ 50 Series EAA Heat-Seal Coatings, visit the Dow Performance Packaging website at www.dow.com/packaging/index.htm.

Back to top

References

4. ADCOTE™ 50C12 Primer (Technical Data Sheet), Packaging and Converting, Rohm and Haas Company, July 2006, pages 1 and 3.
NOTICES

As part of its 2015 Sustainability Goals, Dow has committed to make publicly available safety assessments for its products globally. This product safety assessment is intended to give general information about the chemical (or categories of chemicals) addressed. It is not intended to provide an in-depth discussion of health and safety information. Additional information is available through the relevant Safety Data Sheet, which should be consulted before use of the chemical. This product safety assessment does not replace required communication documents such as the Safety Data Sheet.

The information herein is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Dow be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information herein or the product to which that information refers.

Nothing contained herein is to be construed as a recommendation to use any product, process, equipment or formulation in conflict with any patent, and Dow makes no representation or warranty, express or implied, that the use thereof will not infringe any patent.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

Dow makes no commitment to update or correct any information that appears on the Internet or on its World-Wide Web server. The information contained in this document is supplemental to the Internet Disclaimer, www.dow.com/homepage/term.asp.

Back to top

Form No. 233-01116-MM-0913