Product Safety Assessment

**COSEAL™ Cold Seal Adhesives**


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**Names**

- COSEAL™ cold seal adhesives
- COSEAL 30061A adhesive
- COSEAL 30070 adhesive
- COSEAL 30080M adhesive
- COSEAL 55-114 adhesive

**Product Overview**

- COSEAL™ cold seal adhesives are water-based emulsion polymers manufactured by Rohm and Haas Company, a wholly owned subsidiary of The Dow Chemical Company. These products are milky-white liquids with a slight, ammonia-like odor. For further details, see **Product Description**.

- COSEAL adhesives are used in flexible-packaging applications. They provide good adhesion and anchorage to paper, film, and foil. COSEAL adhesives used for food-contact applications comply with relevant U.S. Food and Drug Administration (FDA) regulations. For further details, see **Product Uses**.

- COSEAL adhesives are for commercial use. Worker exposure is possible during manufacture, transport, or use. Exposure is minimized through engineering controls and the use of personal protective equipment. Consumers may use products for which packaging is sealed with these adhesives. For further details, see **Exposure Potential**.

- Eye contact with these products may cause slight irritation, along with tears and redness. Most COSEAL adhesives contain natural latex rubber, which can produce allergic reactions through skin contact or inhalation in sensitive individuals. Reactions to natural latex protein include redness, runny eyes and nose, possible breathing difficulties, asthma, or anaphylaxis. Prolonged or repeated skin contact with these products may defat and dry the skin, leading to irritation and dermatitis. Inhalation of product vapor or mist can cause irritation of the nose, throat, and lungs and headache or nausea. For further details, see **Health Information**.

- The polymers in COSEAL adhesives are expected to be inert in the environment. The components are unlikely to accumulate in the food chain and are expected to be practically nontoxic to fish or other aquatic organisms on an acute basis. For further details, see **Environmental Information**.
COSEAL™ cold seal adhesives are stable under recommended storage and normal use conditions. Exposure to temperatures greater than 177°C (350°F) can cause product decomposition. For further details, see Physical Hazard Information.

Manufacture of Product

- **Locations** – Rohm and Haas Company, a wholly owned subsidiary of The Dow Chemical Company, manufactures COSEAL™ cold seal adhesives at facilities in Ringwood, Illinois, U.S.A.
- **Process** – COSEAL cold seal adhesives are prepared by blending natural rubber latex with acrylic or other emulsion polymers.

Product Description

COSEAL™ cold seal adhesives are water-based emulsions containing acrylic or ethylene-vinyl polymers blended with natural latex rubber. These commercial-grade adhesives are very low odor and have good adhesion and anchorage to paper, film, and foil.

Product Uses

COSEAL™ cold seal adhesives are used in flexible-packaging applications. The adhesive is coated onto the substrate surface, such as a roll of paper, and dried. When two surfaces containing adhesive are pressed together, a seal is formed. Some packaging examples for these types of adhesives include self-seal bags and envelopes and candy wrappers. COSEAL adhesives used for food-contact applications comply with relevant U.S. Food and Drug Administration (FDA) regulations.

Exposure Potential

COSEAL™ cold seal adhesives are used for flexible packaging applications. Based on the uses for these adhesives, the public could be exposed through:

- **Workplace exposure** – COSEAL adhesives are formulated in closed systems using engineering controls that prevent the escape of liquid or vapors and minimize release to the environment. The potential for exposure is further reduced by proper use of personal protective equipment. Workers who formulate these products may be exposed during maintenance, sampling, testing, or other procedures. Worker exposure could also occur during packaging operations. Good housekeeping should be practiced to keep product dusts generated during processing to a minimum. Each facility should have a thorough training program for employees and appropriate work processes, ventilation, and safety equipment in place to limit exposure. See Health Information.
- **Consumer exposure to COSEAL adhesives** – COSEAL adhesives are not sold directly to consumers; however, certain consumer products may be packaged with these adhesives. See Health Information.
- **Environmental releases** – If released to water or soil the polymer would be inert in the environment. If released to surface water the polymer would initially remain dispersed in water, but eventually settle into the sediments. COSEAL cold seal adhesives are not expected to be biodegradable, but would likely be removed by biological wastewater-treatment facilities via adsorption to biosolids. In the event of a spill, the focus is on

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containing the spill to prevent contamination of soil, surface water, or groundwater. Small spills should be absorbed with inert materials such as sand or soil. See Environmental, Health, and Physical Hazard Information.

- **Large release** – Industrial spills or releases are infrequent and generally contained. If a large spill does occur, dike the area to contain the spill. Evacuate personnel and ventilate the area. Only trained and properly protected personnel must be involved in clean-up operations. Because natural latex rubber is a potential sensitizer, appropriate protective equipment must be worn, including respiratory protection. Spilled material can create slippery conditions. Sweep up or vacuum spillage and collect in suitable container for disposal. See Environmental, Health, and Physical Hazard Information.

- **In case of fire** – These water-based formulations are noncombustible. To extinguish combustible residues of these products, use techniques suitable for the surrounding fire. Keep people away. Isolate the fire and deny unnecessary entry. Closed containers may rupture due to pressure build-up when exposed to fire or extreme heat. Promptly remove containers from the fire zone. If removal is impossible, cool the containers with water spray. Firefighters should wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing. 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 COSEAL™ cold seal adhesives is summarized on the relevant Safety Data Sheets. It is important to note that health risks associated with individual products may vary based on their formulation or intended use. Some products may contain minor components or additives with additional health risks. The Safety Data Sheet is the preferred source for specific health information. An overview of health information appears below.

- **Eye contact** – Direct contact with liquid or mist may cause slight irritation along with tears and redness.

- **Skin contact** – Some of these products contain natural latex rubber, which has been shown to produce allergic reactions through skin contact in sensitive individuals. Reactions to natural latex protein include redness, runny eyes and nose, breathing difficulties, asthma, or anaphylaxis. Prolonged or repeated contact may cause defatting and drying of the skin, which can lead to irritation and dermatitis.

- **Inhalation** – Inhalation of product mist or vapor may irritate the nose, throat, and lungs and possibly result in headache or nausea. Most COSEAL adhesives contain natural latex rubber, which can produce allergic reactions through inhalation in sensitive individuals.

- **Ingestion** – Swallowing these products can cause headache, nausea, vomiting, or gastrointestinal irritation.

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

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Environmental Information

COSEAL™ cold seal adhesives are water-based blends of emulsion polymers and natural latex rubber. If released to the environment, the acrylic polymer component would be inert in the environment, but would likely be removed by biological wastewater-treatment facilities via adsorption to biosolids. If released to surface waters the polymer would initially remain dispersed in water, but eventually settle into sediments. Although these polymers are not considered biodegradable, they will be expected to slowly degrade in the environment, including degradation by physical action or by exposure to sunlight.

Due to their high molecular weight, acrylic polymers would not accumulate in the food chain and would not be expected to be harmful to fish or other aquatic organisms on an acute basis. The natural latex rubber component of these products would be expected to biodegrade very slowly due to microbial action over time.18 Due to its high molecular weight and low water solubility, natural latex rubber is not likely to accumulate in the food chain.

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

Physical Hazard Information19,20

COSEAL™ cold seal adhesives are stable under recommended storage conditions and use. Exposure to temperatures greater than 177°C (350°F) can cause product decomposition.

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 COSEAL™ cold seal adhesives. These regulations may vary by city, state, country, or geographic region. Information may be found by consulting the relevant Safety Data Sheet, Technical Data Sheet, or Contact Us.

Additional Information

- Request the Safety Data Sheet from the Dow Customer Information Group at (www.dow.com/assistance/dowcig.htm)
- Contact Us (www.dow.com/assistance/thoughts.htm)

For more business information about COSEAL™ cold seal adhesives, visit the webpage for COSEAL Water-based emulsions.
References

NOTICES:

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