Ethylene Cracker Residue (ECR)  
Product Stewardship Summary  
(CAS number 64742-90-1)

**What is Ethylene Cracker Residue?**

Ethylene Cracker Residue (ECR), also known as pitch or cracker oil, is a highly viscous brown-black liquid with a distinctive smell, which is produced during the manufacture of ethylene in a steam cracking process. The residue is often blended with cracked gas oil, which is added to lower the viscosity of the residue.

**How is Ethylene Cracker Residue Used?**

ECR is mainly used as fuel, particularly for power plants. Ethylene Cracker Residue is also used in the production of carbon black. Carbon black is used as a black pigment in printing and also reinforces rubber products such as tyres.

**Health, Safety and Environmental Considerations**

ECR has low toxicity after acute exposure. However, ECR causes skin irritation and is therefore classified for skin corrosion. Furthermore, if inhaled, it may irritate the respiratory system and cause dizziness, headaches and nausea.

There is no information on the long-term health effects of ECR on humans. However, ECR is classified as a mutagen and carcinogen and as such requires most stringent exposure controls.

Occupational standards have not been established for ECR, however, the American Conference of Governmental Industrial Hygienists (ACGIH) recommends an occupational exposure level (OEL) for coal tar pitch (ECR) volatiles of 0.2 mg/m³.

ECR is toxic to aquatic organisms. It contains components with the potential to bioaccumulate and may not meet criteria for ready biodegradability.

**Storing and Transporting Ethylene Cracker Residue**

ECR, blended with Cracked Gasoil, is transported by vessel/barge. Normally it is transported at elevated temperatures (typically > 104°F/40°C) as the product is highly viscous at lower temperatures. ECR can accumulate static electricity during transfer; therefore, precautionary measures to prevent static discharge must be taken.

**Risk Characterization Summary**

Risks associated with exposure to this product have been evaluated for the following “chain-of-commerce” activities: manufacture, storage, product transfer, transportation, and customers/markets. Due to health, safety and environmental considerations, it is only manufactured, stored and
transported to customers in closed systems. Likewise, customers are limited to those who only use the product in closed systems as an intermediate for the manufacture of other chemicals. Proper equipment design and handling procedures maintain low risk from exposure to the product where the product is used as a chemical intermediate.

This product stewardship summary 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 chemical’s applicable Safety Data Sheet, which should be consulted before use of the chemical. This product stewardship summary does not supplant or replace required regulatory and/or legal communication documents.

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