

Product Safety Summary

ESCOREZ TACKIFIER RESINS

This Product Safety Summary document is a high-level summary intended to provide the general public with an overview of product safety information on this chemical substance. It is not intended to provide emergency response, medical or treatment information, or to provide a discussion of all safety and health information. This document is not intended to replace the (Material) Safety Data Sheet. Warnings and handling precautions provided below are not intended to replace or supersede manufacturers' instructions and warning for their consumer products which may contain this chemical substance.

1. Chemical Identity

Escorez™ Tackifying Resins are characterized as petroleum hydrocarbon tackifiers. There are two major families. The first consist of major components that are C5-C6 olefins and diolefins (Escorez 1000 and 2000 series). These resins are catalytically polymerized. The second family consists of major components that are Polycyclodienes (C10-C12 Cyclodiene dimers plus Dicyclopentadiene with or without C8-C10 vinyl aromatics (Escorez 5000 series resins). These resins are thermally polymerized.

CAS No.:	Chemical Name:
68478-07-9	Naphtha (petroleum), light steam-cracked arom., piperylene conc., polymd. (Escorez 1000 series).
68527-25-3	Naphtha (petroleum), light steam-cracked arom., polymer with light steam-cracked arom. petroleum naphtha piperylene conc. and medium steam-cracked arom. petroleum naphtha (Escorez 2000 series).
68132-00-3	Naphtha (petroleum), light steam-cracked, debenzenized, polymers, hydrogenated (Escorez 5000 series).

2. Product Uses

Escorez Tackifying Resins are used to enhance the tack properties of a variety of adhesive polymers. End use applications may include Hot Melt Adhesives and Pressure Sensitive Adhesives.

3. Physical / Chemical Properties

Escorez Tackifying Resins are solid polymers that are stable and non-hazardous. If heated above the flash point, they may burn or decompose to flammable hydrocarbons (fire situations). Safety hazards at ambient temperature are generally negligible, due to their high molecular weight, minimal toxicity and general inertness. These products do not possess the physical hazards of being a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive. The flash point is estimated to be >392°F /200°C.

4. Health Information

Health hazards of Escorez Tackifying Resins, at ambient temperature are generally negligible. They are not toxic, corrosive, sensitizers, reproductive toxins, or mutagenic, neurotoxic, or carcinogenic, and do not cause specific target organ effects. No adverse health effects are expected with ingestion or inhalation. Prolonged dermal or eye contact may result in slight irritation. Additives and potential impurities have been identified and evaluated. The potential health hazards are negligible due to the low levels contained in the polymer and the fact that the additives are encapsulated in the polymer. . Based on these evaluations, under U.S. Occupational Safety and Health Administration (OSHA) rules, European Union regulations and the United

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Nations Globally Harmonized System of Classification and Labeling of Chemicals (UN GHS) these products are considered non-hazardous with regards to health effects.

5. Additional Hazard Information

When handling hot material, wear heat resistant gloves to protect your hands and skin. Immediately immerse in or flush affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. Health hazards may be associated with the additives or impurities (e.g., unreacted monomers, solvent residues, reaction by-products). The identity and amount of additives and impurities in ExxonMobil Chemical's Resins have been evaluated. They are present at low levels (i.e. much less than 1 wt. %). Additionally, the additives are encapsulated in the polymer. Therefore, any potential hazards from additives and impurities are so greatly reduced that the polymers containing them would not be classified as hazardous.

6. U.S. Food and Drug Administration (FDA) Regulated Uses

Appropriate manufacturing and distribution practices are employed to ensure the quality of this product when offered for use in indirect additives to food contact applications.

7. Environmental Information

Escorez Tackifying Resins biodegrade at a slow rate and may persist in the environment. They are not expected to cause short-term toxicity to fish or other aquatic organisms. Because of its low solubility in water, chronic aquatic toxicity is not expected.

8. Exposure Potential

- **Workplace exposure** – This refers to potential exposure in a manufacturing facility or through various industrial applications. Generally, exposure of personnel in manufacturing facilities is relatively low due to the predominantly enclosed nature of the process, storage and handling operations. Exposure can also occur from inhalation to particulate dusts in the packaging material. The Occupational Safety and Health Administration (OSHA) exposure limits for nuisance dust are 5 mg/m³ (respirable dust) and 15 mg/m³ (total dust). The American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) are 10 mg/m³ for inhalable particulates (total dust) and 3 mg/m³ for respirable particulates (total dust) for Particulates Not Otherwise Classified (PNOC).
- **Consumer use of products containing ESCOREZ TACKIFYING RESINS** – This category of exposure is highly variable depending on the product being used and the conditions under which it is used. Exposure of the majority of consumers is likely to be infrequent and of short duration. Exposure could occur through the use of hot melt adhesive formulations that contain Escorez Tackifying Resins. The best way to prevent exposure is to work in well-ventilated areas, wearing chemical resistant gloves. Good personal hygiene practices should always be followed.
- **Environmental releases** – As a chemical manufacturer, we are committed to operating in an environmentally responsible manner everywhere we do business. Our efforts are guided by in-depth scientific understanding of the environmental impact of our operations, as well as by the social and economic needs of the communities in which we operate. Industrial spills or releases are rare; however a spill may pose a flammability issue. Our operational improvement targets and plans are based on driving incidents with real environmental impact to zero and delivering superior environmental performance.

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9. Manufacture of Product

- **Process** – Escorez 1000 and 2000 series resins are produced by catalytic polymerization of olefins and diolefins. Escorez 5000 series resins are produced via thermal polymerization.

10. Risk Management

- **Workplace Risk Management** – When using this product, make sure that there is adequate ventilation. Always use chemical resistant gloves to protect your hands and skin and always wear eye protection such as chemical goggles. When handling hot material, wear heat resistant gloves to protect your hands and skin. Do not eat, drink, or smoke where chemicals are handled, processed, or stored. Wash hands and skin following contact. If this product dust gets into your eyes, flush eyes thoroughly with tap water. If irritation occurs, get medical assistance. Please refer to the (Material) Safety Data Sheet.
- **Consumer Risk Management** - This chemical is not sold directly to the public for general consumer uses. If exposure should occur, it is expected to be infrequent and of short duration. Always follow manufacturers' instructions, warnings and handling precautions when using their products. The best way to minimize exposure to vapors is to work in well-ventilated areas

11. Regulatory Information

Regulations may exist that govern the manufacture, sale, transportation, use and/or disposal of this product and may vary by city, state, country or geographic region. Additional helpful information may be found by consulting the relevant ExxonMobil (Material) Safety Data Sheet at:

- <http://www.msds.exxonmobil.com/psims/psims.aspx?brand=xomcc>

12. Conclusion Statements

Escorez Tackifying Resins ...

- are a widely used polymer.
- are considered non-hazardous.
- do not cause adverse health or environmental effects at levels typically found in the workplace or environment.
- are non-flammable but can burn; use with good ventilation.

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