Nonene
Product Stewardship Summary
(CAS number 27215-95-8)

Chemical Formula for Nonene
C9H18

What is Nonene?
Nonene, also known as Propylene Trimer, is a flammable, slightly aromatic, colourless liquid that is a branched olefin produced by the polymerisation of propylene. It is extracted from the poly gasoline that is formed in a reactor. Once separated, the nonene is treated with antioxidants, before onward shipment.

How is Nonene Used?
Nonene is a chemical intermediate used to produce other chemical intermediates such as alkyl phenols, isodecyl alcohol, neodecanoic acid and diphenylamine; which are used to make detergents, cleaners and lubricant antioxidants. Nonene is also used as a plasticiser in PVC wiring and cabling, electrical insulation, automotive interiors and coated fabrics.

Nonene can also be used to produce other chemical intermediates such as alkyl phenols, isodecyl alcohol, neodecanoic acid, and diphenylamine. As a result, we may encounter it in detergents and cleaners, as well as in antioxidants used in crankcase lubricating oils.

Health, Safety and Environmental Considerations
Nonene is expected to be of low toxicity and is mildly to moderately irritating to the skin and eyes. As with all hydrocarbons of low viscosity, it does have the potential for producing severe, potentially fatal pneumonia (aspiration chemical pneumonitis) if liquid is breathed into the lungs following accidental ingestion. Inhalation of high concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

Nonene vapours are heavier than air and may travel across the ground and reach remote ignition sources. Take precautionary measures against static discharge.

Nonene is acutely toxic to aquatic organisms, but is considered to be of low concern, primarily due to poor water solubility.
Storing and Transporting Nonene

Nonene should only be used in well ventilated areas and kept away from heat, sparks open flames and/or hot surfaces. Care should be taken during handling and transferring, as electrostatic charges may be generated.; electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment prior to handling or transferring this product. Nonene is transported by tank truck, rail car and vessel. It is inhibited with trace amounts of an oxygen scavenger to prevent oxidation and maintain product quality.

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.