

## Product Safety Summary Polyblend

### Chemical Identity

CAS Number: 68514-38-5, Hydrocarbons, C4-C10 Unsaturated.

Polyblend is predominantly medium chained aliphatic hydrocarbons produced by distillation of crude butadiene. Polyblend contains benzene, 1,3 butadiene and 4-vinylcyclohexene.

### Product Uses

Polyblend is sold as a blendstock for fuels. It is further processed with the overhead distillation cut sold into the gasoline blendstock market and a bottoms product that is used as viscosity control of utility fuels.

### Physical Information

Polyblend is a significant fire hazard based on its physical properties, including flash point (22-22.5°C closed cup), vapor pressure, and boiling point. Vapors are heavier than air. Therefore, preventive measure must be taken to minimize potential for fire or explosion.

Even though Polyblend is an extremely flammable liquid and vapor, it is stable under recommended storage conditions. If a release occurs, vapors may travel a long distance and ignition and/or flash back may occur.

### Health Information

In poorly ventilated areas, Polyblend vapors can accumulate, exclude oxygen and lead to asphyxiation.

Polyblend contains as a minor component butadiene. Butadiene is listed as a known human carcinogen by the International Agency for Research on Cancer (IARC) and other agencies. It has been shown to cause cancer in laboratory animals. Butadiene epidemiology studies have linked employment in two different chemical operations each with a different type of cancer. The factors causing these excess cancers have not been determined because the workers are also exposed to other chemicals in these workplaces.

Butadiene has caused birth defects in laboratory animals only at doses toxic to the mother; however butadiene has been shown to be toxic to the fetus in laboratory animals at doses that are not toxic to the mothers. Butadiene has been shown to cause injury to reproductive organs in mice, although no reproductive effects were observed in rats following exposure to high levels of butadiene.

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Polyblend contains benzene. Exposure to benzene is associated with cancer (acute myeloid leukemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders.

Polyblend also contains 4-vinylcyclohexene (VCH) a dimer of 1,3 butadiene. VCH is listed as a suspect human carcinogen. Carcinogenic and adverse ovarian effects have been observed in animal studies.

A major component of Polyblend is light hydrocarbons. Very high exposure (confined spaces / abuse) to light hydrocarbons may result in central nervous system depression

### Environmental Information

Polyblend, if accidentally spilled in the environment, is potentially a threat to the environment due to moderate toxicity to aquatic organisms (e.g. fish and invertebrates). Polyblend biodegrades at a moderate rate and will not persist in the environment. Because of this and its volatility, it has a tendency to move from water to air. Chronic aquatic toxicity is not expected, however a significant spill may cause long-term adverse effects in the aquatic environment. The constituents of this product are expected to degrade at a moderate to rapid rate in air through oxidation processes. Measures should be taken to prevent its release to the atmosphere and minimize any exposure to the environment from manufacturing or use activities.

### Exposure Potential

The primary route of potential human exposure to Polyblend is by inhalation.

**Workplace Exposure** - Generally, exposure of personnel to Polyblend in manufacturing facilities and industrial workplace is relatively low because the process, storage and handling operations are closed, with little potential for releases to the air. Typically industrial workplaces have control programs and work practices to limit exposure.

**Consumer Use** - Polyblend is not sold to the general public. Consumer exposure from industrial facilities is limited.

**Environmental Releases** - As a chemical manufacturer, we are committed to operating in an environmentally responsible manner. Our efforts are guided by 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 or release may pose a significant 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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### Risk Management

**Workplace Risk Management** – A variety of risk management strategies are used in Polyblend manufacturing and use facilities.

Processes are designed to eliminate ignition sources and intrinsically safe equipment is used. Processing, storage, and transport are conducted in closed systems and systems are designed to minimize the potential for exposure or releases to the environment.

Personal Protective Equipment is used in the workplace to prevent exposure in situations where exposure cannot be controlled using engineering controls or other methods.

In addition, through Responsible Care, ACC's global industry performance initiative, since 1988 ACC member companies in the United States have reduced emissions of core Hazardous Air Pollutants (HAPs) chemicals by 86 percent; and reduced emissions of all TRI listed HAPs chemicals by 79 percent. Responsible Care companies go above and beyond government requirements and openly communicate their results to the public.

**Consumer Risk Management** - This material is not sold directly to the public for general consumer uses. As a result of its use in industrial chemical gasoline blending and utility fuels, consumer exposure is highly unlikely. 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 prevent exposure to vapors is to work in well-ventilated areas.

### Transportation Information

Polyblend is transported commercially by rail.

### Disclaimer

*Before using this product, the user is advised to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained in this document as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suited and the information is applicable to the user's specific application. TPC Group does not make, and expressly disclaims, all warranties, including warranties of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of any trade or from any course of dealing in connection with the use of the information contained in this document or the product itself. TPC Group further makes no representations, and extends no warranties of any kind, that the use, sale, or other disposition of the product, whether alone or in combination with other products, will not infringe any patent, copyright, trademark, or other proprietary right. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information contained herein or the product itself. Information contained in this document is given without reference to any intellectual property issues, as well as federal, state or local laws which may be encountered in the use of the information in this document or the product. Such questions should be investigated by the user.*