

# HSE Management System

## Benzene Awareness Policy

### REGULATORY STANDARD:

OSHA – 29 CFR 1910.1028

Prepared	Reviewed	Approved	Effective Date	Version No.
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#### Important Notice:

1. This procedure is a Controlled Document and shall not be amended without the authority of the Safety Specialist – North America.
2. Any queries or feedback concerning the contents of this Procedure should be addressed to the Safety Specialist – North America.
3. This document is rendered null and void upon print.

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## 1.0 PURPOSE

This safety guideline is intended to provide suitable information to all Airswift employees regarding the potential toxic effects of Benzene so that adequate measures can be taken to limit exposures through controls in the workplace.

## 2.0 GENERAL

Of all the hydrocarbons, Benzene poses the most serious long-term threat. Exposure over time, to even low levels of Benzene can cause leukemia, blood changes and aplastic anemia.

### 2.1 CHARACTERISTICS

Benzene is a colorless to light-yellow liquid with a pleasant sweet odor.

Formula: (C<sub>6</sub>H<sub>6</sub>)  
CAS No.: 71-43-2

Benzene is a flammable liquid that can accumulate static electricity. Benzene vapors are heavier than air and may travel to a source of ignition and flash back. The vapors are readily dispersed by wind movement and/or air currents. Liquid benzene tends to float on water and may travel to a source of ignition and spread fire. Benzene is highly reactive with no oxidizing materials.

### 2.2 USES

Benzene is a component of gasoline, both in the manufacturing process and found naturally in crude oil; Benzene is also used as a feed stock for chemical manufacturing.

## 3.0 HEALTH EFFECTS

3.1 **WARNING** – Benzene is a cancer-causing agent in humans. All contact should be reduced to the lowest possible level. The above exposure limits are for air levels only. Skin contact may also cause overexposure.

Benzene is one of the most hazardous of all petroleum products because of its adverse health hazards and high flammability.

The following adverse health effects are important to remember where there may be a potential exposure to Benzene:

- a) **Acute:** At high concentrations (1000 PPM) Benzene has an acute effect on the central nervous systems causing headaches, dizziness, drowsiness, unconsciousness, and possible death.

Acute exposure can also cause breathlessness, irritability, and giddiness.

- b) **Chronic:** Benzene has the chronic exposure effect on bone marrow (aplastic anemia leukemia).  
Chronic exposure can also cause convulsions, liver damage, heart damage, blood diseases (aplastic anemia), and cancer (leukemia). These symptoms can take months or years to surface and can develop without physical or visible indications.
- c) Repeated skin contact leads to irritant contact dermatitis (rash); as with any petroleum solvent (which Benzene is also classified as), it will leach the natural oils out of the skin. Direct contact with the skin can cause erythema and/or blistering.
- d) Benzene is irritating to eyes and mucous membranes.
- e) Flammable/dangerous fire risk: benzene has a very low flash point making it dangerous to have any open flame, spark or source of ignition when vapors are present.
- f) Explosive limits in air 1.5 to 8% by volume: benzene is highly flammable at low levels of vapor quantity in air.

#### 4.0 PERSONAL PROTECTIVE MEASURES

Airswift employees are not permitted to work in areas where there may be a potential for Benzene exposure.

#### 5.0 TRAINING

All employees will be provided awareness training in this program in order to be familiar with the potential hazards and proper safe work procedures to follow if exposed to this health hazard.