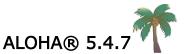
## Flammable Threat Zone



Time: April 11, 2025 1546 hours ST (user specified)

Chemical Name: ETHYLENE OXIDE

Carcinogenic risk - see CAMEO Chemicals

Wind: 3.3 meters/second from W at 3 meters

THREAT ZONE: (HEAVY GAS SELECTED)

Threat Modeled: Flammable Area of Vapor Cloud

Model Run: Heavy Gas

Red : 11 meters --- (50 % by vol)

Note: Threat zone was not drawn because effects of near-field patchiness

make dispersion predictions less reliable for short distances.

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SITE DATA:

Location: AVENIDA DA FABRICA 298, PENA, PORTUGAL

Building Air Exchanges Per Hour: 0.38 (sheltered double storied)

Time: April 11, 2025 1546 hours ST (user specified)

CHEMICAL DATA:

Chemical Name: ETHYLENE OXIDE

CAS Number: 75-21-8 Molecular Weight: 44.05 g/mol

AEGL-1 (60 min): N/A AEGL-2 (60 min): 45 ppm AEGL-3 (60 min): 200 ppm

IDLH: 800 ppm LEL: 30000 ppm UEL: 1000000 ppm

Carcinogenic risk - see CAMEO Chemicals

Ambient Boiling Point: 9.8° C

Vapor Pressure at Ambient Temperature: greater than 1 atm Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)

Wind: 3.3 meters/second from W at 3 meters

Ground Roughness: urban or forest
Air Temperature: 15° C
No Inversion Height
Cloud Cover: 5 tenths
Stability Class: D
Relative Humidity: 78%

SOURCE STRENGTH:

Leak from short pipe or valve in horizontal cylindrical tank

Flammable chemical escaping from tank (not burning)

Tank Diameter: 0.77 meters Tank Length: 2 meters

Tank Volume: 930 liters

Tank contains liquid Internal Temperature: 15° C

Chemical Mass in Tank: 700 kilograms

Tank is 85% full

Circular Opening Diameter: 0.5 inches

Opening is 40 centimeters from tank bottom

Release Duration: 56 minutes

Max Average Sustained Release Rate: 12.1 kilograms/min

(averaged over a minute or more)

Total Amount Released: 583 kilograms

Note: The chemical escaped as a mixture of gas and aerosol (two phase flow).

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