





Library name in Chempro100: CWA-9.2.3

Alarm indications and agent coverage

| Alarm indication Text | Icon | Library specified agents | Low mg/m ³ | Library unspecified agents/cases |
|--------------------------|---|-----------------------------|--------------------------|--|
| Nerve |  | GA, GB, GD, GF VX | 0.1 0.1 | Nerve precursors |
| Blister |  | HD L | 2 2 | Vesicant precursor |
| Chemical Hazard |  | - | - | Chemicals in hazardous concentration |
| Blood |  | AC, CK | 20 | - |

Library specified agents:




Nerve: Nerve agents -Tabun (GA), Sarin (GB), Soman (GD), Cyclo-Sarin (GF) and VX.

Blister: Blister agents- Sulphur mustard (HD) and Lewisite (L).

Blood: Blood agents- Hydrogen cyanide (AC) and Cyanogen chloride (CK).

Library name in Chempro100: TIC-9.2.3

Alarm indications and agent coverage

| Alarm indication Text | Icon | Library specified agents | Low ⁽¹⁾ ppm | Library unspecified agents/cases |
|--------------------------|---|--|--|----------------------------------|
| Acid |  | Hydrogen Chloride (HCl) Hydrogen Fluoride (HF) Nitric Acid (HNO ₃) | 50 ⁽²⁾ 30 ⁽²⁾ 25 ⁽²⁾ | Acetic Acid |
| Toxic |  | Ammonia (NH ₃) Carbon disulfide (CS ₂) Hydrogen sulfide (H ₂ S) Chlorine Cyanogen chloride (CK) Hydrogen Cyanide (AC) Arsine (AsH ₃) Ethylene oxide (ETOX) Phosphorous trichloride (PH ₃) | 300 500 100 50 ⁽²⁾ 50 20 3 100 25 | Acrylonitrile |
| Chemical Hazard |  | - | - | Agent in hazardous concentration |

Notes

(1): Low = Alarm limit (IDLH-level). Note: Alarm may occur also below this concentration limit.

(2): Valid in < 16 g (H₂O)/m³.

See following paragraphs for other general limitations and conditions in detail.




Library specified agents:

Acid: Hydrogen Chloride (HCl), Hydrogen Fluoride (HF) and Nitric Acid (HNO₃) from IDLH level (Immediate Danger for Life and Health). Alarm indication 'Chemical Hazard' may occur in high acid concentrations.

Toxic: Ammonia (NH₃), Carbon disulfide (CS₂), Hydrogen sulphide (H₂S), Hydrogen cyanide (AC), Cyanogen Chloride (CK), Ethylene Oxide (ETOX), Arsine (AsH₃), Chlorine (Cl₂) and Phosphorous trichloride (PH₃) from about IDLH level. Alarm indication 'Chemical Hazard' appears often preceding or following 'Toxic' alarm.

Library name in Chempro 100: Precursor-9.2.3

Alarm indications and agent coverage

| Alarm indication Text | Icon | Library specified agents | Low ⁽¹⁾ mg/m ³ | Library unspecified agents/cases |
|--------------------------|---|---|---|--|
| Nerve precursor |  | Dimethyl methyl phosphonate / Di methyl phosphite / Methyl phosphonic dichloride / Pinacolyl alcohol | 0.5 / 0.5 / 0.2 / 150 | CWA nerve agents |
| Vesicant precursor |  | Thiodiglycol | 0.1 | |
| Chemical Hazard |  | - | - | Agent in hazardous concentration |

Notes

(1): Low = Alarm limit. Note: Alarm may occur also below this concentration limit. See following paragraphs for other general limitations and conditions in detail.


Library specified agents:

Nerve precursor: Dimethyl methyl phosphonate (DMMP), Dimethyl phosphite, Methyl phosphonic dichloride and Pinacolyl alcohol. Alarm indication 'Chemical Hazard' may occur in high nerve precursor concentrations.

Vesicant precursor: Thiodiglycol. Alarm indication 'Chemical Hazard' may also occur.

Library name in Chempro 100: First Responder-9.2.3

Alarm indications and agent coverage

| Alarm indication Text | Icon | Library Specified Agents | Alarm Limit ⁽¹⁾ ppm |
|-----------------------|---|--------------------------|-----------------------------------|
| Toxic |  | Ethylene Oxide | 100 |
| | | Acrylonitrile | 100 |
| | | Hydrogen Sulfide | 10 |
| | | Arsine | 5 |
| | | Ammonia | 300 |
| | | Phosphorous Trichloride | 25 |
| | | Carbon Disulfide | 500 |
| | | Allyl Alcohol | 40 |
| | | Hydrogen Cyanide | 50 |
| | | Cyanogen Chloride | 50 |
| | | G type Nerve | 0.2 mg/m ³ |
| | | HD type Blister | 5 mg/m ³ |
| Chemical Detected | - | Any measurable agent | - |

Notes

(1): Operation in cold (< 5 °C) and hot environments (>35 °C) may lead to increased alarm limits. Operation in conditions where background air is slightly contaminated can also lead to increased alarm limits.

See following paragraphs for other general limitations and conditions in detail.




Toxic: Toxic Industrial Compounds like Ethylene Oxide (ETOX), Acrylonitrile, Arsine (AsH₃), Hydrogen Sulfide (H₂S), Ammonia (NH₃), Phosphorous Trichloride (PCl₃), Carbon Disulfide (CS₂), Allyl Alcohol, Hydrogen Cyanide (AC) and Cyanogen Chloride (CK) as well as Chemical Warfare Agents like G-type Nerve agents and HD-Blister agent.

Chemical Detected:

Library specified agents in concentrations lower than Alarm Limit. Chemical detected alarm often precedes and follows Toxic alarm indication. Indication may occur also due to several other compounds.

Library name in Chempro100: VOC-9.2.3

Alarm indications and agent coverage

| Alarm indication Text | Icon | Library specified agents | Low ⁽¹⁾ ppm | Library unspecified agents/cases |
|--------------------------|--|--|---|-------------------------------------|
| Flammable |  | Acetone Ethanol Methanol n-Hexane Isopropanol Diethyl ether Ethyl acetate Methyl methacrylate | 100 2000 500 600 400 400 400 100 | Solvents and fuel vapours |
| Organic acid |  | Acetic acid | 50 | - |
| Chemical Hazard |  | - | - | Agent in hazardous concentration |

Notes

 (1): Low = Alarm limit. Note: Alarm may occur also below this concentration limit.
 See following paragraphs for other general limitations and conditions in detail.


Library specified agents:

Flammable: Acetone, Ethanol, Methanol, n-Hexane, Isopropanol, Diethyl ether, Ethyl acetate and Methyl methacrylate. Alarm indication 'Chemical Hazard' may occur in high concentration and humidity.

Organic acid: Acetic acid. Alarm indication 'Chemical Hazard' may occur in high concentration.

Library name in Chempro 100: First Responder-9.2.3E

Alarm indications and agent coverage

| Alarm indication Text | Icon | Library Specified Agents | Alarm Limit ⁽¹⁾ ppm |
|--------------------------|---|-----------------------------|-----------------------------------|
| Toxic |  | Ethylene Oxide | 100 |
| | | Acrylonitrile | 100 |
| | | Hydrogen Sulfide | 10 |
| | | Arsine | 5 |
| | | Ammonia | 300 |
| | | Phosphorous Trichloride | 25 |
| | | Carbon Disulfide | 500 |
| | | Allyl Alcohol | 40 |
| | | Hydrogen Cyanide | 50 |
| | | Cyanogen Chloride | 50 |
| | | G type Nerve | 0.2 mg/m ³ |
| | | HD type Blister | 5 mg/m ³ |

Notes

(1): Operation in cold (< 5 °C) and hot environments (>35 °C) may lead to increased alarm limits. Operation in conditions where background air is slightly contaminated can also lead to increased alarm limits.

See following paragraphs for other general limitations and conditions in detail.







Toxic: Toxic Industrial Compounds like Ethylene Oxide (ETOX), Acrylonitrile, Arsine (AsH₃), Hydrogen Sulfide (H₂S), Ammonia (NH₃), Phosphorous Trichloride (PCl₃), Carbon Disulfide (CS₂), Allyl Alcohol, Hydrogen Cyanide (AC) and Cyanogen Chloride (CK) as well as Chemical Warfare Agents such as G-type Nerve agents and HD-Blister agent.

Chemical

Detected: Library specified agents in concentrations lower than Alarm Limit. Often precedes and follows indication of "Toxic". Indication may occur also due to several other compounds.

Library name in Chempro 100: H.T.C 9.2.3

Alarm indications and semi-quantitative concentration limit:

| Alarm Indication Text | Icon | Library specified Agents | Alarm Limit ⁽¹⁾ | Library unspecified agents/causes |
|-----------------------|---|--------------------------|--------------------------------|--|
| TDI |  | Toluene di-isocyanate | 0.04-0.06 pm | Alkanes and diesel vapor in low concentration. |
| Acetonitrile |  | Acetonitrile | 30-100 ppm | |
| Inorganic acid |  | Hydrogen Chloride | 5-10 ppm | |
| Inorganic acid |  | Hydrogen Fluoride | 2-5ppm(RH<40) >>5ppm(RH>40) | |
| Toxic |  | Toxic | Not specified | G type nerve agents, Lewisite, inorganic acids in high concentration possible. |
| VOC |  | VOC | Not specified | Alcohols, alkanes, ketones, fuel and solvent vapors. |

Notes

(1): Low = Alarm level. Note: Alarm may occur also below this concentration limit.