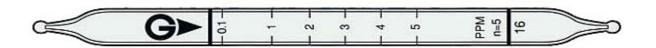
Phosgene COCI2 No.16



## Performance

Measuring Range       0.05 to 0.1 ppm       0.1 to 5 ppm       5 to 20 ppm         Number of Pump Strokes       10       5       1         Correction Factor       1/2       1       4         Sampling Time       1 minute per pump stroke         Detecting Limit       0.01 ppm (n=10)         Colour Change       White → Yellow         Reaction Principle       COCl₂+ (CH₃)₂NC₆H₄CHO → (CH₃)₂NC₆H₄CHCl₂ + CO₂ (CH₃)₂NC₆H₄CHCl₂ + (C₆H₅)₂NH → Reaction Product         Coefficient of Variation       10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)         Shelf Life       1.5 Years         Corrections for temperature & humidity       Temperature correction is necessary         Store the tubes in the refrigerator to keep at 10°C (50°F) or below.					
Correction Factor       1/2       1       4         Sampling Time       1 minute per pump stroke         Detecting Limit       0.01 ppm (n=10)         Colour Change       White → Yellow         Reaction Principle       COCl₂+ (CH₃)₂NC₆H₄CHO→ (CH₃)₂NC₆H₄CHCl₂ + CO₂ (CH₃)₂NC₆H₄CHCl₂ + (C₆H₅)₂NH → Reaction Product         Coefficient of Variation       10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)         Shelf Life       1.5 Years         Corrections for temperature & humidity       Temperature correction is necessary	Measuring Range	0.05 to 0.1 ppm	0.1 to 5 ppm	5 to 20 ppm	
Sampling Time       1 minute per pump stroke         Detecting Limit       0.01 ppm (n=10)         Colour Change       White → Yellow         Reaction Principle       COCl₂+ (CH₃)₂NC₆H₄CHO→ (CH₃)₂NC₆H₄CHCl₂ + CO₂ (CH₃)₂NC₆H₄CHCl₂ + (C₆H₅)₂NH → Reaction Product         Coefficient of Variation       10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)         Shelf Life       1.5 Years         Corrections for temperature & humidity       Temperature correction is necessary	Number of Pump Strokes	10	5	1	
Detecting Limit       0.01 ppm (n=10)         Colour Change       White → Yellow         Reaction Principle       COCl₂+ (CH₃)₂NC₆H₄CHO→ (CH₃)₂NC₆H₄CHCl₂ + CO₂ (CH₃)₂NC₆H₄CHCl₂ + (C₆H₅)₂NH → Reaction Product         Coefficient of Variation       10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)         Shelf Life       1.5 Years         Corrections for temperature & humidity       Temperature correction is necessary	Correction Factor	1/2	1	4	
Colour Change       White → Yellow         Reaction Principle       COCl₂+ (CH₃)₂NC₆H₄CHO→ (CH₃)₂NC₆H₄CHCl₂ + CO₂ (CH₃)₂NC₆H₄CHCl₂ + (C₆H₅)₂NH → Reaction Product         Coefficient of Variation       10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)         Shelf Life       1.5 Years         Corrections for temperature & humidity       Temperature correction is necessary	Sampling Time	1 minute per pump stroke			
Reaction Principle $COCl_2 + (CH_3)_2NC_6H_4CHO \longrightarrow (CH_3)_2NC_6H_4CHCl_2 + CO_2 (CH_3)_2NC_6H_4CHCl_2 + (C_6H_5)_2NH \longrightarrow Reaction ProductCoefficient of Variation10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)Shelf Life1.5 YearsCorrections for temperature & humidityTemperature correction is necessary$	Detecting Limit	0.01 ppm (n=10)			
Coefficient of Variation  10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)  Shelf Life  1.5 Years  Corrections for temperature & humidity  CH <sub>3</sub> ) <sub>2</sub> NC <sub>6</sub> H <sub>4</sub> CHCl <sub>2</sub> + (C <sub>6</sub> H <sub>5</sub> ) <sub>2</sub> NH → Reaction Product  10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)  Temperature correction is necessary	Colour Change	White → Yellow			
Shelf Life  1.5 Years  Corrections for temperature & humidity  Temperature correction is necessary	Reaction Principle				
Corrections for temperature & humidity  Temperature correction is necessary	Coefficient of Variation	10% (for 0.1 to 1 ppm), 5% (for 1 to 5 ppm)			
temperature & humidity  Temperature correction is necessary	Shelf Life	1.5 Years			
Store the tubes in the refrigerator to keep at 10°C (50°F) or below.		Temperature correction is necessary			
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## Possible coexisting substances and their interferences

Substance	Concentration	Interference	Change colour by itself
Hydrogen chloride	≥1/10 time	Plus error	Produces yellow discoloration
Chlorine	<u>≥</u> 1/2 time	Plus error	Produces yellow discoloration
Nitrogen dioxide	≥1/5 time	Plus error	Produces yellow discoloration

## Calibration gas generation Permeation tube method

TLV-TWA	TLV-STEL	Explosive range
0.1ppm	-	-