

**Fact Sheet:**  
**Gastec Detector Tubes Requiring Refrigeration**

Gastec Detector Tubes offer some of the broadest operating temperature ranges available. The tubes can be used in virtually any environment - from 32°F to 104°F. While refrigeration is not required for the majority of Gastec Detector Tubes, the tubes in the table below require refrigeration in order to maintain their published shelf life.

**Detector Tubes in Numerical Order by Tube Number**

Tube No.	Tube Name
1DL	Carbon monoxide
4LT	Hydrogen sulfide
4S	Hydrogen sulfide
8LL	Chlorine
9D	Nitrogen dioxide
9DL	Nitrogen dioxide
16	Phosgene
21	Carbonyl sulfide
21LA	Carbonyl sulfide
23L	Chlorine dioxide
60	Phenol
61	o-Cresol
75L	tert-Butyl mercaptan
77	TBM, DMS
81L	Acetic acid
91D	Formaldehyde
91L	Formaldehyde
91LL	Formaldehyde
91M	Formaldehyde
91P	Formaldehyde
91PL	Formaldehyde
91TP	Formaldehyde
92	Acetaldehyde
92L	Acetaldehyde
92M	Acetaldehyde
93	Acrolein
126L	Chlorobenzene
130L	Vinylidene chloride
131L	Vinyl chloride

Tube No.	Tube Name
131LA	Vinyl chloride
131LB	Vinyl chloride
132D	Trichloroethylene
132HA	Trichloroethylene
132L	Trichloroethylene
132LL	Trichloroethylene
132M	Trichloroethylene
133D	Tetrachloroethylene
133HA	Tetrachloroethylene
133L	Tetrachloroethylene
133LL	Tetrachloroethylene
133M	Tetrachloroethylene
134	Carbon tetrachloride
134L	Carbon tetrachloride
137LA	Chloroform
137LL	Chloroform
139	1,2-Dichloroethylene
151D	Acetone
151L	Acetone
152D	Methyl ethyl ketone
152L	Methyl ethyl ketone
153L	Methyl isobutyl ketone
154	Cyclohexanone
155	Methylcyclohexanone
163L	Ethylene oxide
163LL	Ethylene oxide
165L	Ethylene glycol
174LL	1,3-Butadiene
230	Methyl iodide
284	Copper ion

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While refrigeration is not required for the majority of Gastec Detector Tubes, the tubes in the table below require refrigeration in order to maintain their published shelf life.

**Detector Tubes in Alphabetical Order by Application**

Application	Tube No.	Tube Name
Acetaldehyde	91D	Formaldehyde
Acetaldehyde	151D	Acetone
Acetaldehyde	152D	Methyl ethyl ketone
Acetaldehyde	92	Acetaldehyde
Acetaldehyde	92L	Acetaldehyde
Acetaldehyde	92M	Acetaldehyde
Acetic acid	81L	Acetic acid
Acetic anhydride	81L	Acetic acid
Acetone	151D	Acetone
Acetone	152D	Methyl ethyl ketone
Acetone	151L	Acetone
Acrolein	93	Acrolein
Acrylic acid	81L	Acetic acid
Allyl chloride	131L	Vinyl chloride
Benzaldehyde	91L	Formaldehyde
Benzyl chloride	132L	Trichloroethylene
1,3-Butadiene	174LL	1,3-Butadiene
Butyric acid	81L	Acetic acid
Carbon monoxide	1DL	Carbon monoxide
Carbon tetrachloride	134	Carbon tetrachloride
Carbon tetrachloride	134L	Carbon tetrachloride
Carbonyl sulfide	21	Carbonyl sulfide
Carbonyl sulfide	21LA	Carbonyl sulfide
Chlorine	132D	Trichloroethylene
Chlorine	8LL	Chlorine
Chlorine dioxide	23L	Chlorine dioxide
Chlorine dioxide	8LL	Chlorine
Chlorobenzene	126L	Chlorobenzene
Chloroform (Trichloromethane)	137LA	Chloroform
Chloropicrin	134	Carbon tetrachloride
Copper ion	284	Copper ion
Cyclohexanone	154	Cyclohexanone
Cyclohexanone	91L	Formaldehyde
Diacetone alcohol	154	Cyclohexanone

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Application	Tube No.	Tube Name
Diacetyl	92	Acetaldehyde
1,2-Dichloroethylene	139	1,2-Dichloroethylene
1,2-Dichloroethylene	132LL	Trichloroethylene
1,3-Dichloropropane	139	1,2-Dichloroethylene
1,3-Dichloropropane	132M	Trichloroethylene
1,3-Dichloropropene	131LA	Vinyl chloride
1,3-Dichloropropene	132HA	Trichloroethylene
1,3-Dichloropropene	132M	Trichloroethylene
Dichlorvos	132D	Trichloroethylene
Dichlorvos	132LL	Trichloroethylene
Diisobutyl ketone	91L	Formaldehyde
Dimethyl sulfide	77	TBM & DMS
Epichlorohydrin	163L	Ethylene oxide
Ethyl chloroformate	131LA	Vinyl chloride
Ethylene glycol	165L	Ethylene glycol
Ethylene oxide	163L	Ethylene oxide
Ethylene oxide	163LL	Ethylene oxide
Formaldehyde	91P	Formaldehyde
Formaldehyde	91PL	Formaldehyde
Formaldehyde	91TP	Formaldehyde
Formaldehyde	91D	Formaldehyde
Formaldehyde	91L	Formaldehyde
Formaldehyde	91LL	Formaldehyde
Formaldehyde	91M	Formaldehyde
Formaldehyde	93	Acrolein
Formic acid	81L	Acetic acid
Furfural	91D	Formaldehyde
Furfural	154	Cyclohexanone
Hydrogen chloride	132D	Trichloroethylene
Hydrogen sulfide	4S	Hydrogen sulfide
Hydrogen sulfide	4LT	Hydrogen sulfide
Isophorone	154	Cyclohexanone
Isovaleric acid	81L	Acetic acid
m-Cresol	61	o-Cresol
m-Cresol	61	o-Cresol
2-Mercaptoethanol	75L	tert-Butyl mercaptan
Methacrylic acid	81L	Acetic acid
2-Methyl allyl chloride	131LA	Vinyl chloride
Methyl chloroformate	131LA	Vinyl chloride

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Application	Tube No.	Tube Name
Methyl ethyl ketone	152D	Methyl ethyl ketone
Methyl ethyl ketone	91D	Formaldehyde
Methyl ethyl ketone	151D	Acetone
Methyl ethyl ketone	152L	Methyl ethyl ketone
Methyl ethyl ketone	151L	Acetone
Methyl iodide	230	Methyl iodide
Methyl isobutyl ketone	151D	Acetone
Methyl isobutyl ketone	152D	Methyl ethyl ketone
Methyl isobutyl ketone	153L	Methyl isobutyl ketone
Methylcyclohexanone	155	Methylcyclohexanone
Methylcyclohexanone	155	Methylcyclohexanone
Naphthalene	60	Phenol
Nitrogen dioxide	9D	Nitrogen dioxide
Nitrogen dioxide	9DL	Nitrogen dioxide
Nitrogen dioxide	9D	Nitrogen dioxide
Nitrogen dioxide	9DL	Nitrogen dioxide
o-Cresol	61	o-Cresol
o-Cresol	61	o-Cresol
p-Cresol	61	p-Cresol
p-Cresol	61	o-Cresol
p-Ethyl benzylchloride	131LA	Vinyl chloride
Phenol	60	Phenol
Phosgene	16	Phosgene
Propionaldehyde	91L	Formaldehyde
Propionaldehyde	151L	Acetone
Propionic acid	81L	Acetic acid
Propylene dichloride	131LA	Vinyl chloride
Propylene oxide	163L	Ethylene oxide
tert-Butyl mercaptan	75L	tert-Butyl mercaptan
tert-Butyl mercaptan	77	TBM & DMS
tert-Butyl mercaptan	75L	tert-Butyl mercaptan
tert-Butyl mercaptan	77	TBM & DMS
1,1,2,2-Tetrachloroethane	131L	Vinyl chloride
Tetrachloroethylene	133D	Tetrachloroethylene
Tetrachloroethylene	132D	Trichloroethylene
Tetrachloroethylene	133HA	Tetrachloroethylene
Tetrachloroethylene	133L	Tetrachloroethylene
Tetrachloroethylene	133LL	Tetrachloroethylene
Tetrachloroethylene	133M	Tetrachloroethylene

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Application	Tube No.	Tube Name
trans-1,2-Dichloroethylene	132D	Trichloroethylene
1,2,4-Trichlorobenzene	131LA	Vinyl chloride
Trichloroethylene	132D	Trichloroethylene
Trichloroethylene	132HA	Trichloroethylene
Trichloroethylene	132L	Trichloroethylene
Trichloroethylene	132LL	Trichloroethylene
Trichloroethylene	132M	Trichloroethylene
Valeric acid	81L	Acetic acid
Vinyl chloride	131L	Vinyl chloride
Vinyl chloride	131LA	Vinyl chloride
Vinyl chloride	131LB	Vinyl chloride
4-Vinyl cyclohexene	174LL	1,3-Butadiene
Vinylidene chloride	132D	Trichloroethylene
Vinylidene chloride	130L	Vinylidene chloride