

**GUIDELINES ON ODOUR  
POLLUTION & ITS CONTROL**

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**CENTRAL POLLUTION CONTROL BOARD**  
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**Table -1**  
**Details of Offensive Odorous Compounds Emitted from Industries**

Sl. No.	Compound/ Odorant	Formula	Molecular Weight	Volatility at 25°C in ppm	Odour Detection Threshold in ppm (v/v)	Offensive Odour Description	
1.	<b>Inorganic Compounds</b>						
	• Ammonia	NH <sub>3</sub>	17	Gas	17	Pungent, Irritating	
	▪ Chlorine	Cl <sub>2</sub>	71	Gas	0.080	Pungent, Suffocation	
	▪ Hydrogen Sulphide	H <sub>2</sub> S	34	Gas	0.00047	Rotten eggs	
	▪ Ozone	O <sub>3</sub>	48	Gas	0.5	Pungent, irritating	
	▪ Sulphur dioxide	SO <sub>2</sub>	64	Gas	2.7	Pungent, irritating	
2.	<b>Acids</b>						
	▪ Acetic Acid	CH <sub>3</sub> COOH	60	Gas	1.0	Vinegar	
	▪ Butyric Acid	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> COOH	88	Gas	0.12	Rancid butter	
3.	<b>Propionic Acid</b>						
	▪ Propionic Acid	CH <sub>3</sub> CH <sub>2</sub> COOH	74	Gas	0.028		
3.	<b>Alcohols</b>						
	▪ Amyl alcohol	C <sub>5</sub> H <sub>11</sub> OH	88	Gas	---	---	
4.	<b>Aldehydes &amp; Ketones</b>						
	▪ Butyl alcohol	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> OH	74	Gas	0.10	--	
4.	<b>Aldehydes &amp; Ketones</b>						
	▪ Formaldehyde	HCHO	30			Acrid	
	▪ Acetaldehyde	CH <sub>3</sub> CHO	44	Gas	0.067	Fruit	
	▪ Butylaldehyde	C <sub>4</sub> H <sub>9</sub> CHO	72			Rancid	
	▪ Acetone	CH <sub>3</sub> COCH <sub>3</sub>	58			Fruit	
	5.	<b>Amines</b>					
▪ Methyl amine		CH <sub>3</sub> NH <sub>2</sub>	31	Gas	4.7	Putrid, Fishy	
▪ Dimethyl amine		(CH <sub>3</sub> ) <sub>2</sub> NH	45	Gas	0.34	Putrid, Fishy	
▪ Trimethyl amine		(CH <sub>3</sub> ) <sub>3</sub> N	59	Gas	0.0004	Putrid, Fishy	
▪ Ethyl amine		C <sub>2</sub> H <sub>5</sub> NH <sub>2</sub>	45		0.27	Ammoniacal	
▪ Diethyl amine		(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> NH	129		0.020		
▪ Di-isopropyl amine		(C <sub>3</sub> H <sub>7</sub> ) <sub>2</sub> NH <sub>2</sub>	101		0.13	Fishy	
▪ Dibutyl amine		(C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub> NH	129	8,000	0.016	Fishy	
▪ n butyl amine		CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> NH <sub>2</sub>	73	93,000	0.080	Sour ammonia	
6.		<b>Mercaptans</b>					
		▪ Allyl mercaptan	CH <sub>2</sub> CHCH <sub>2</sub> SH	74	---	0.0015	Disagreeable, garlic
	▪ Amyl mercaptan	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> SH	104	---	0.0003	Unpleasant, Putrid	
	▪ Benzyl mercaptan	C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> SH	124	---	0.0002	Unpleasant, strong	
	▪ Ethyl mercaptan	C <sub>2</sub> H <sub>5</sub> SH	62	710,000	0.0003	Decayed Cabbage	
	▪ Methyl mercaptan	CH <sub>3</sub> SH	48	Gas	0.0005	Rotten Cabbage	
	▪ Phenyl mercaptan	C <sub>6</sub> H <sub>5</sub> SH	110	2,000	0.0003	Putrid, garlic	
	▪ Propyl mercaptan	C <sub>3</sub> H <sub>7</sub> SH	76	2,20,000	0.0005	Unpleasant	
	7.	<b>Sulphides</b>					
		▪ Diethyl sulphide	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> S	106		0.02	Ether
		▪ Dimethyl sulphide	(CH <sub>3</sub> ) <sub>2</sub> S	62	830,000	0.001	Decayed Cabbage
▪ Dimethyl disulphide		(CH <sub>3</sub> ) <sub>2</sub> S <sub>2</sub>	94		0.0076	Putrid	
▪ Diphenyl sulphide		(C <sub>6</sub> H <sub>5</sub> ) <sub>2</sub> S	186	100	0.0001	Unpleasant	
8.	<b>Organic Heterocycles</b>						
	▪ Indole	C <sub>8</sub> H <sub>7</sub> (CH) <sub>2</sub> NH	117	360	0.0001	Faecal, nauseating	
	▪ Pyridine	C <sub>5</sub> H <sub>5</sub> N	79	27,000	0.0001	Pungent, irritating	
	▪ Skatole	C <sub>9</sub> H <sub>9</sub> N	131	200	0.001	Fecal, nauseating	
	▪ Thiocresol	CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> SH	124	---	0.0001	Rancid	

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