

Table 2.11. Propensity of VOCs to form tropospheric ozone according to two reactivity scales: the Maximum Incremental Reactivity (MIR) for single-day urban plumes appropriate to North American conditions, and the Photochemical Ozone Creation Potential (POCP) for multi-day regional ozone formation appropriate to European conditions.

Species	Reactivity	
	North America MIR scale (g-O ₃ /g-substance)	Europe POCP scale (relative units)
<i>ODSs^a</i>		
Methyl chloroform	<0.1	0.2
HCFC-22	<0.1	0.1
HCFC-123	<0.1	0.3
HCFC-124	<0.1	0.1
HCFC-141b	<0.1	0.1
HCFC-142b	<0.1	0.1
HCFC-225ca	<0.1	0.2
HCFC-225cb	<0.1	0.1
<i>HFCs^a</i>		
HFC-23	<0.1	0
HFC-32	<0.1	0.2
HFC-125	<0.1	0
HFC-134a	<0.1	0.1
HFC-143a	<0.1	0
HFC-152a	<0.1	1
HFC-227ea	<0.1	0
<i>Hydrocarbons and other compounds^b</i>		
Ethane	0.31	12
Propane	0.56	18
n-Butane	1.32	35
Isobutane	1.34	31
Isopentane	1.67	41
Ethylene	9.07	100
Propylene	11.57	112
Dimethylether	0.93	17
Methylene chloride	0.07	7
Methyl chloride	0.03	0.5
Methyl formate	0.06	3
Isopropanol	0.71	14
n-Pentane	1.53	40
Trichloroethylene	0.60	33

^a Values from Hayman and Derwent (1997). The values for North America were estimated from the POCP values given.

^b Values for North America from Carter *et al.* (1998, update of 5 February 2003, <http://pah.cert.ucr.edu/~carter/reactdat.htm>); values for Europe from Derwent *et al.* (1998).